



NQ Verification 2015–16 Key Message Reports

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|---------------------------------|----------------------------|
| Verification group name: | Engineering Science |
| Levels | N4 – Higher |
| Date published: | October 2016 |

This Report combines all Verification Key Messages for the academic session 2015-2016.



NQ Verification 2015–16 Key Messages Round 1

01

Section 1: Verification group information

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| Verification group name: | National Courses — Engineering Science |
| Verification event/visiting information | Event |
| Date published: | March 2016 |

National Courses/Units verified:

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|---------|------------|-------------------------------------|
| H23B 74 | National 4 | Electronics and Control |
| H23A 75 | National 5 | Engineering Contexts and Challenges |
| H23B 75 | National 5 | Electronics and Control |
| H23D 75 | National 5 | Mechanisms and Structures |
| H23B 76 | Higher | Electronics and Control |

02

Section 2: Comments on assessment

Assessment approaches

Almost all of the centres that were verified made use of the SQA-produced Unit assessment support Pack 2 (Unit by Unit approach). One centre also devised its own instrument of assessment using Unit assessment support Pack 1 (Portfolio approach) as a basis for this. However, where a centre's own instrument of assessment is used, care must be taken to ensure that each of the Assessment Standards is cross-matched with the evidence to ensure full Unit coverage. As such, it is recommended that centres take advantage of [SQA's prior verification facility](#).

In terms of validity of approach, the SQA-produced Unit assessment support pack is always acceptable, but centres must ensure that they use the current version.

To aid the verification process, centres should ensure that any administrative paperwork related to their own assessments is clear and well laid out. It is recommended that the Assessment Standard number and result are recorded next to the evidence used for the centre's assessment decision.

Assessment judgements

Centre assessment judgements were largely in-line with national standards. However, there were some instances where errors in candidate work were marked as correct and that the Assessment Standard was met (errors found in this sample included vectors with incorrect directions, answers with no units and arithmetic errors). This leads to a 'Not Accepted' verification decision.

Likewise, if a candidate does not have evidence to meet an Assessment Standard, then they cannot be assessed as having passed it. Again, this leads to a 'Not Accepted' verification decision.

This is also something which should have been highlighted through effective internal verification systems.

03

Section 3: General comments

It was clear from the sample that centres understand the purpose of judging evidence tables and are using them appropriately. However, more care should be taken when determining whether candidate evidence meets the Assessment Standards or not.

Evidence, for assessment purposes, can come from any source and doesn't need to be from a specific assessment task.

Although centres had evidence of their internal verification policy, and its use, the prominence of assessment errors indicates that the effectiveness of these policies needs to be evaluated and improved upon.



NQ Verification 2015–16 Key Messages Round 2

01

Section 1: Verification group information

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|---|----------------------------------|
| Verification group name: | Engineering Science |
| Verification event/visiting information | Postal and visiting verification |
| Date published: | June 2016 |

National Courses/Units verified:

H23E 74 National 4 Added value unit
C723 75 National 5 Internally assessed component of course assessment
C723 76 Higher Internally assessed component of course assessment

02

Section 2: Comments on assessment

Assessment approaches

The use of SQA-produced assessments is mandatory for the National 5 and Higher course assignments. With regard to this, all verified centres were found to have used appropriate approaches to assessment.

It should be noted that when candidates progress from National 4 to Advanced Higher, there should be progressively less scaffolding from the class teacher. Where there is teacher assistance, this should be noted on the marking sheet and in the record of progress. Likewise, the number of marks awarded to the candidate should reflect the amount of teacher assistance at each stage.

Assessment judgements

Of the centres verified, the majority were given 'accepted' verification judgements. However, the remainder required additional support and were required to amend mark allocations to bring them in line with national standards.

National 4

Centres verified for the National 4 added value unit were found to have an understanding of the evidence requirements for this assessment instrument.

Please note that no marks are allocated at National 4 — judgements are made on whether candidates have provided sufficient evidence to demonstrate the meeting of a range of assessment standards (as defined by the judging evidence table).

As the added value unit is an ungraded assessment, a limited amount of observational evidence is acceptable. In such cases, it is crucial that a written and signed teacher statement is provided, stating that the teacher has witnessed the achievement of the assessment standard.

National 5 and Higher

In the course assignment for National 5 and Higher, no observational evidence is permitted and marks can only be awarded where clear evidence is present (please see notes on teacher assistance above).

Centres must use the most up-to-date assignments from the SQA secure site. This session, the mark allocation changed from band descriptors to a marks rubric which provided additional clarity. This has been well received by the field, however some centres are still assessing against the band descriptors — causing some confusion.

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. Centres should 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.

03

Section 3: General comments

Two centres were verified for the National 4 added value unit (postal verification) and 21 centres were verified for National 5/Higher where visits took place. A range of Understanding Standards materials are now available and more will follow shortly — these will assist in making assessment judgements. In addition, further training will take place next year to support subject teachers in the assessment process.

It is crucial that centres demonstrate effective use of internal verification procedures and show what impact internal verification processes have had.