National Qualifications 2013
Internal Assessment Report
Technological Studies

The purpose of this report is to provide feedback to centres on verification in National Qualifications in this subject.

National Qualifications (NQ) Units

D186: Applied Electronics (Intermediate 2, Higher and Advanced Higher Level)

D187: Systems & Control (Higher and Advanced Higher Level)

Unit	No. of centres	No. of candidates	No. of Accepted centres	No. of Not Accepted centres
D186 Applied Electronics	15	121	8	6
D187 Systems & Control	5	45	5	0

(Note: the verification sample from a centre may contain groups of any, or all, of the three levels.)

The central verification event this year sampled 19 centres and reviewed the Applied Electronics and Systems & Control Units at all three levels.

The overall number of centres recording a Not Accepted verification decision increased by one compared to 2012, although the sample size was greater by five.

General comments

All centres in this year's verification sample had a clear understanding of the assessment of the Structured Questions (IA1) in both Units and across all three levels.

Of the six centres that recorded a Not Accepted verification result, two were for clerical errors and four were for assessing the evidence for Practical Activities in the Applied Electronics Unit (D186).

Unit specifications, instruments of assessment and exemplification materials

The verification event indicated that centres have a good understanding of the Unit specifications and instruments of assessment. Assessors tended to be less familiar with the exemplification material for Practical Activities.

Evidence Requirements

Assessors are familiar with the Structured Questions (IA1) and can accurately and consistently assess these to national standards.

In the Applied Electronic Unit (D186), assessors are advised to benchmark Practical Activities using the 'Exemplification of Standards — Technological Studies' document. At Higher level, tasks should be set that enable candidates to

test circuits that include an analogue sensor or an output driver and logic array with at least two different integrated circuits (ICs).

Administration of assessments

In this year's sample there was little evidence of internal verification procedures, such as cross-marking.

Areas of good practice

It was noted that a number of centres successfully used a pro-forma-type approach to assist candidates in structuring their evidence for Practical Activities. This helped to ensure that the evaluation of the practical work was more comprehensive and less likely to include simplistic statements such as 'the system worked'.

Specific areas for improvement

In the Applied Electronics Unit (D186), centres should note that the evidence for Practical Activities should include a valid problem statement, simulation printout, wiring diagram (preferably with accompanying photograph) and a valid evaluation. All problem tasks should be benchmarked against the 'Exemplification of Standards — Technological Studies' document.
At Higher level, tasks must allow candidates to test circuits that include an analogue sensor or an output driver and logic array with at least two different integrated circuits (ICs).

Assessors are also asked to note that it is recommended that a variety of problem statements are issued to candidates with a ratio of around five tasks per twenty candidates. This could allow for candidates to undertake a task in a more appealing context and would also aid the assessment process in the centre.