



**National Qualifications 2012
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

Titles/levels of NQ Units verified:

D185: Energy (Intermediate 2) — Central verification

D186: Applied Electronics (Int 2, Higher and Advanced Higher) — Central verification

D187: Systems and Control (Higher and Advanced Higher) — Central verification

General comments

Unit	No. of centres	No. of candidates	No. of Accepted centres	No. of Not Accepted centres
D185 Energy	1	4	1	0
D186 Applied Electronics	13	135	8	5
D187 Systems and Control	1	10	1	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 15 centres and reviewed Applied Electronics at all levels, Systems and Control at Higher, and Energy at Intermediate 2.

It was disappointing to note that the total number of 'Not Accepted' verification decisions was the same as in 2011. Of the five centres that did not correctly apply national standards, all did so when assessing the evidence for Practical Activities.

Unit specifications, instruments of assessment and exemplification materials

The centres selected for verification this year were familiar with the Unit specifications and instrument of assessments. It was noted, however, in the Practical Activities for Applied Electronics there were some instances where centres had issues with regards to benchmarking standards in terms of the degree of difficulty of the problem task and quality of the reporting.

Evidence Requirements

Some of the centres in this year's sample lacked an understanding of the Evidence Requirements for Practical Activities in the Applied Electronics Unit. Their assessment decisions tended to accept a general lack of evidence of the recording of building and testing or problem solving tasks that were too simplistic (for example, at Higher level, a solution should feature at least two different ICs).

Administration of assessments

Centres are asked to ensure that they submit copies of all NAB material and detail of their internal verification procedures along with the candidates' evidence.

Areas of good practice

The marking of the structured question assessment (IA1) across all levels was well done and in line with national standards. There was little evidence of the older unrevised version of the NABs being used to assess candidates this year.

Specific areas for improvement

Centres may wish to pay particular attention to the quality of the evidence for Practical Activities IA2 (and IA3 at Advanced Higher) in the Applied Electronics Unit.

Common issues with the assessment of the evidence reviewed this year included: problems not demanding enough for the level of presentation, practical tasks rather than problems issued by the centre; and at Higher level, logic circuits without a sensor input or output driver.

In addition, candidates are still tending to make generic statements such as 'the system worked' and centres are asked to ensure that all evaluations include appropriate comment on the system's performance against the given specification.

Candidates' evidence for Practical Activities should include a:

- ◆ problem statement set at an appropriate level
- ◆ simulation printout
- ◆ wiring diagram, preferably with accompanying photograph of the complete circuit
- ◆ valid evaluation against the given specification

Centres are also reminded that it is recommended that a range of problem statements are issued to candidates with a ratio of around five tasks per 20 students.