



**National Qualifications 2013  
Internal Assessment Report  
Electronics and Instrumentation**

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

# National Courses

Applied Practical Electronics X119 (Intermediate 1)

## General comments

All 15 centres delivering the award in session 2012–13 were subject to visiting verification and all were Accepted.

All centres have a clear and accurate understanding of the requirements of the national standards and are gaining consistency, in relation to previous sessions, with regard to the general accepted standard of required evidence, both written and practical (the biggest variable is still the accepted standard of practical work: from circuit layout, to soldering then eventual testing).

With regard to written submissions, the minimum acceptable standard appears to be the norm but there were also good examples where candidates were encouraged to be more analytical with conclusions in their written submissions.

There are still clear differences in the amount of detail given by assessors and Internal Verifiers for external verification. Not all centres were able to provide clear written detail with regard to assessment decisions but most decisions were found to be accurate when explored during the external verification process.

Some centres lacked written evidence that internal verification had taken place — this was cleared up in subsequent discussions, but centres are encouraged to provide clear documentary evidence that internal verification has taken place.

## Course Arrangements, Unit specifications, instruments of assessment and exemplification materials

All centres are familiar with the documentation required to deliver this award effectively. Some centres use the cycle lights project whereas others use the traffic-light controller project.

## Evidence Requirements

All centres demonstrated a clear understanding of the Evidence Requirements for the Course.

Although more consistent than in previous sessions, there are still some differences in the general accepted standard of required practical evidence (the biggest variable, as stated above, is the accepted standard of practical work from circuit layout, to soldering then eventual testing). With regard to written submissions, the minimum acceptable standard appears to be the norm as stated above, but there were also good examples where candidates were encouraged to be more analytical with conclusions in their written submissions.

## **Administration of assessments**

Most assessment decisions were found to be accurate.

In some instances, assessors and Internal Verifiers had changed during the session due to staff changes and there were clear differences in the amount of detail given by assessors and Internal Verifiers for external verification.

Not all centres were able to provide clear written detail with regard to assessment decisions but most decisions were found to be accurate when explored during the external verification process and adjustments were made where necessary. As stated above, some centres lacked written evidence that internal verification had taken place; however, this was cleared up in subsequent discussions but centres are encouraged to provide clear documentary evidence that internal verification has taken place.

## **Areas of good practice**

The following areas of good practice were identified during session 2012–13 and should raise standards if implemented in all centres, where possible and applicable:

- ◆ Clear documentation was provided regarding the degree of support offered to each candidate to clarify marking decisions.
- ◆ The excellent layout of all required tools and equipment within the classroom gave easy access for candidates in order to carry out the tasks required.
- ◆ All boards were mounted and a wire loom constructed linking all boards together. All connectors were clearly labelled.
- ◆ The candidates had prepared and produced their own printed circuit boards.
- ◆ Team building was encouraged within the class.
- ◆ Good examples of circuits from previous sessions were available for candidates to view.
- ◆ A good standard of candidates' written responses was achieved with extensive use of diagrams as well as simplified block diagrams. Most candidates included good evaluation reports of the work achieved.

## **Specific areas for improvement**

The following areas for improvement were noted in certain centres and are highlighted here in order to raise awareness where applicable.

- ◆ Although projects were generally marked to a very high standard, in some instances, more detail in the comments sheet would be useful when comparing marks from different candidates.
- ◆ Clear documentation regarding internal verification decisions should be provided.
- ◆ The use of available strip-board grids to enable candidates to provide neater circuit layouts should be encouraged.