



**Higher National Qualifications**

**And**

**Scottish Vocational Qualifications**

**Senior Verifier Report**

**2007**

**Subject: 232 Electronics & Instrumentation**

**Sector Panel: Engineering, Science and Mathematics**

The purpose of this report is to provide feedback to centres on verification which has taken place within Higher National and Scottish Vocational Qualifications in this subject.

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## HIGHER NATIONAL UNITS

### FEEDBACK TO CENTRES

#### General comments:

Eight centres were subject to HN visiting verification this session, including 1 university, with no centre experiencing a hold on certification. For 3 centres, the units sampled were mainly tried and tested units with centres being experienced in delivering these units. Consequently, no major issues were identified as centres have comprehensive IV systems in place with master folders for these units comprising all teaching and assessment material. The other five centres visited offer the new HNC and HND awards with new units being delivered for either the first or second time and are either using SQA assessment exemplars or assessments that have been prior verified. All of these centres are represented on the Qualification Support Team (QST) for the relevant awards that they deliver and consequently network with other centres offering the same awards.

Unlike last session, most centres are now prepared for the new style Form EV8a and generally have all required information available. This makes the external verification visit more productive. The use of development points is valued by centres in their quest for continuous quality improvement.

#### Advice on good practice and areas for further development:

The introduction of QSTs for the new HNC and HND awards has allowed centres to work more closely together than ever before and this is to be encouraged. Centres are now sharing development tasks for the common good of the relevant award. Another significant change this session is the increased use of prior verification for Units in new awards. This is also to be encouraged as the use of prior verified assessments allows the external verifier to focus on other tasks when visiting centres.

## HIGHER NATIONAL GRADED UNITS

### TITLES/LEVELS OF HN GRADED UNITS VERIFIED

#### **Electronics Graded Unit 1 DG2T 34**

A team of verifiers reviewed candidates' scripts from the eight centres offering the award this session at a central verification event.

#### **Electronics Graded Unit 2 DG2V 35**

A team of verifiers reviewed candidates' scripts from the two centres offering the award this session at a central verification event.

#### **Measurement & Control Graded Unit 1 FO13 34**

A team of verifiers reviewed candidates' scripts from one of the three centres offering the award this session at a central verification event.

The main points are given below.

### FEEDBACK TO CENTRES

#### **General comments:**

#### **Electronics Graded Unit 1 DG2T 34**

1) This is the first session that centres have developed their own individual examination papers. Each paper had been prior verified by SQA. The verifiers tried to ensure, during the prior verification process, that all examination papers were of a similar standard. The verifiers were initially concerned about the potential for variations in results, from centre to centre, for this session. However, the actual results indicate that the whole process is more complex than just the examination paper itself. The quality of teaching and learning and the ability of candidates and teaching staff, all contribute to the actual results. Other factors include centre timetables, etc. It is hoped that all centres offer the same examination next session, ideally on the same date and under similar conditions.

2) Similar to previous sessions, not all centres used examination style paper for candidate responses. Centres that did use appropriate examination paper were more accurate in totalling the candidates' marks and it was also easier for the verifiers to track all decisions made by the markers. Some inaccuracies were found in totalling candidates' marks where examination paper was not used and it was also much more difficult to track marking decisions made by markers. The inaccuracies discovered did not change any candidate's grade.

3) Issues still remain in certain centres with regard to internal verification processes not being visible to the external verification team. The team of external verifiers expected to see evidence of internal verification on the actual candidates' scripts in order to make judgments as to whether internal verification was effective or otherwise.

4) The results this session were an improvement on the results for previous sessions. This is partially due to centres gaining more experience with this unit but also due to changes in the style of questions being asked. This change reflects the adjustments made to the unit specification during session 2006/7. The improvements will also partly be due to centres setting their own examinations.

In summary, there are still issues to be resolved within certain centres with regard to:

- Internal verification procedures not always being visible.
- Candidates not being issued with standard examination scripts.
- Some examples of poor marking decisions, inaccurate totalling of marks or lack of clarity of marking.

- Some examples of poor examination paper layout.
- Some centres did not submit the copy of the examination paper with the SQA prior verification stamp on it for the central verification event.

### **Electronics Graded Unit 2 DG2V 35**

The material provided by both centres included internal verification evidence regarding the grade awarded for each candidate. This amounted to 24 grading points per candidate and was in line with SQA documentation.

The project titles used were in line with samples given in the assessment exemplar but the depth of technical detail was less than expected for HND candidates. There was little in the way of verification/testing strategies and actual test results. This also gave rise to a lack of faultfinding techniques and a subsequent critical appraisal of the project. This resulted in a lack of available evidence to support assessor judgements with regard to grading checklist points 7, 11 and 13.

There was little evidence of actual logbook submissions although most candidates included typed up extracts from logbooks within their project reports. The group of verifiers felt that systematic and frequent logbook entries are key to successful projects and that they should be submitted.

Project progress reports should be used to provide constructive feedback to candidates at appropriate milestones throughout the lifecycle of the project. There was little formal evidence documenting that such meetings had taken place. However, it is envisaged that a considerable amount of dialogue, both formal and informal, will have taken place between candidates and assessors. It is recommended that formal documentation be available for appropriate milestones throughout the project.

Candidates require guidance, at the start of the project, with regard to the differences between project objectives and tasks. They did not always appear to be able to differentiate between the two and this made it difficult for these candidates to be truly evaluative at the end of the project. Centres should make efforts to ensure that candidates have clear and distinct project objectives and tasks.

The project reports provided, broadly followed the guidance given in the assessment exemplar. However, assessors did not highlight many spelling and grammar mistakes, although the use of English is included in checkpoint 15.

Last session, no evidence was provided with regard to the oral presentation (checkpoint 17). Both centres included evidence this session by using the assessment exemplar checklist on page 44.

Although data sheets and other non-original information is required for completeness of the project report, it should be reinforced to candidates that it is their own efforts and findings that are being assessed.

In summary, it appears that centres may need support early in the project lifecycle, in order to achieve standards that are in line with SQA HND requirements. With regard to the SQA grading checklist, checkpoints 1, 2, 3, 7, 8, 11, 13, 14, 15, 16, 19 & 21 are key to raising these standards. One method of achieving this would be to have visiting verification during the project lifecycle as well as continuing with the central verification event at the end of the project.

### **Measurement & Control Graded Unit 1 FO13 34**

Although three centres offered this award in session 2006/7, only one centre presented the work of candidates at the central verification event due to different timing of examinations at each centre. Although all centres used a single examination paper, each centre has different delivery patterns, hence the wide spread of examination dates from February to August. The QST for this award will discuss this for next session.

### **Advice on good practice and areas for further development:**

As stated previously in this report, the introduction of QSTs for the new HNC and HND awards has allowed centres to work more closely together than ever before and this is to be encouraged. Centres are now sharing development tasks for the common good of the relevant award. Another significant change this session is the increased use of prior verification for new awards. This is also to be encouraged as the use of prior verified assessments allows the external verifier to focus on other tasks when visiting centres.

The QST Electronics group are to form a subgroup to generate examination papers for the HNC Graded Unit for next session (main diet plus resit) and also try and agree a common date for the examination. The HND Graded Unit is to be looked at with a view to including visiting verification early on in the project lifecycle as well as the end of unit central verification event. The centres offering HNC/D Measurement & Control are to discuss the timing of the HNC Graded unit examination.

## **NATIONAL UNITS**

**(i.e. Freestanding units which contribute to NPAs or NCs etc.)**

## **TITLES/LEVELS OF NATIONAL UNITS VERIFIED**

Eight centres were subject to NQ visiting verification, covering a wide range of NQ units.

## **FEEDBACK TO CENTRES**

### **General comments:**

The NQ units sampled were mainly tried and tested units with most centres being experienced in delivering these units. Consequently, no major issues were identified as most centres have comprehensive IV systems in place with master folders for most units comprising all teaching and assessment material. The main area where centres require to do further work is in the provision of marking schemes or guidelines. Some were comprehensive but, similar to last session, in other centres scant “model answers” only were available allowing varying degrees of interpretation.

### **Advice on good practice and areas for further development:**

Most of the NQ external verification activities for session 2006/7 involved tried and tested units and assessments where most problems have been ironed out by now. However, challenges will arise in the coming sessions, with the introduction of the new engineering framework for NC Group Awards in Engineering.