



National Units, Higher National Units and Graded Units

Qualification Verification Summary Report 2019

Electrical Engineering

Verification group: 419

Introduction

Higher National Qualifications

For this session qualifications verifiers undertook 10 visits and centrally verified Graded Unit 1 evidence from two centres. Five of the visits reviewed the assessment and verification of DN3X 35 Graded Unit 2. The other visits reviewed an appropriate mix of HN units at SCQF levels 6, 7 and 8.

FY9E 34	DC & AC Principles
DN47 34	Three Phase Systems
H01T 34	Electrical Machine Principles
DN3V 34	Graded Unit 1
DN3X 35	Graded Unit 2
DG57 35	Transmission Lines and Complex Waves
DN3W 34	Electricity Power Systems
FY7L 35	Electrical Installation Design
DG3G 34	Electrical Networks and Resonance
DN4A 35	Utilisation of Electrical Energy in Buildings
DN4K 35	Electrical Motor Drive Systems
DW6W 33	Electrical Engineering Principles 1

External verification of two centres delivering Customised Awards also took place, one was a visit to a centre in Scotland, the other a remote verification of the first delivery of a suite of in-house awards by an overseas centre.

H4X0 04	Introduction to BS7671
H4X1 04	Requirements for Electrical Installation to BS7671
GG6P 04	Diploma in Operational and Maintenance Engineering — Power System Protection (Distribution/Transmission) Technician
GG6V 04	Diploma in Operational and Maintenance Engineering — Power Cable (Distribution/Transmission) Technician
GG6W 04	Diploma in Operational and Maintenance Engineering — Power Network Operator (Transmission/Distribution) Technician
GG6X 04	Diploma in Operational Maintenance and Engineering — Power Plant Maintenance (Instrumentation and Control) Technician
GG6Y 04	Diploma in Operational and Maintenance Engineering — Power Plant Maintenance (Electrical) Technician
GG70 04	Diploma in Operational and Maintenance Engineering — Power Plant Maintenance (Mechanical) Technician
GG71 04	Diploma in Operational and Maintenance Engineering — Power Plant Operator (Combined Cycle) Technician
GG72 04	Diploma in Operational and Maintenance Engineering — Power Service Maintenance (Substation/Transmission) Technician
GK6R 04	Diploma in Operational and Maintenance Engineering — Power Overhead Line (Distribution/Transmission) Technician
GN52 04	Diploma in Operational and Maintenance Engineering — Electrical Distribution Network Maintenance Technician
GN53 04	Diploma in Operational and Maintenance Engineering — Power Systems Dispatching Technician

The outcome of all verification events, bar one, was 'high confidence'. The outcome for the other centre was 'reasonable confidence'. This centre met the requirements of the action which had been stipulated and the outcome decision was revised to 'high confidence'. The central verification event for Graded Unit 1 also produced 'high confidence' outcomes.

A number of the visits were specific reviews of Graded Unit 2 activity. For each of these centres, qualification verifiers were satisfied with the evidence presented.

National Units

F5HH 11	Electrical Wiring Skills
F5HP 11	Electrical Plant Safety and Maintenance
F5D7 11	Fundamental Electrical Systems

Two visits took place. In each case the decision was that qualification verifiers had 'high confidence' in the centre.

Reports in all categories of award were generally informative with clear comments about the evidence reviewed. Good practice was noted in a number of criteria, showing what appears to be enhancements at a number of centres with regard to candidate recruitment and support. Recommendations were made across most criteria. Particular attention is drawn to the benefits of the use of distinct colours by internal verifiers and the inclusion of comments on candidate evidence where marking agreement, or non-agreement, occurs.

Category 2: Resources

Criterion 2.1: Assessors and internal verifiers must be competent to assess and internally verify, in line with the requirements of the qualification.

No negative findings were recorded at the centres offering the Customised Awards.

A number of HN visit reports included comments in respect of this criterion which, although not necessary, were positive.

Criterion 2.4: There must be evidence of initial and ongoing reviews of assessment environments; equipment; and reference, learning and assessment materials.

Overall the evidence presented by centres allowed qualification verifiers to identify clear compliance with the requirements. A number of centres have enhanced their operational management of these reviews by the use of electronic files of meeting agendas and minutes. In some instances actions raised are tracked electronically.

Category 3: Candidate support

Criterion 3.2: Candidates' development needs and prior achievements (where appropriate) must be matched against the requirements of the award.

Clear evidence was presented which indicates that centres are enhancing their policies and procedures for this criterion. Although the typical first-step is an online application, more use is made of candidate interviews and an earlier identification of appropriate support mechanisms. This has proved beneficial to candidates and centres in respect of achievement and progression.

No recommendations were made for this criterion.

Criterion 3.3: Candidates must have scheduled contact with their assessor to review their progress and to revise their assessment plans accordingly.

For the two centres offering Customised Awards, candidate contact and review is formally incorporated in the delivery and assessment schedule.

The centres offering HN awards (that were visited) were fully compliant in this criterion. Some offer additional support tutorials while others include a PDP unit in their curriculum delivery.

One recommendation was made for criterion 3.3, that the centre should consider adopting a standardised assessment answer booklet to permit enhanced feedback to candidates and so aid progress review.

Category 4: Internal assessment and verification

Criterion 4.3: Assessment instruments and methods and their selection and use must be valid, reliable, practicable, equitable and fair.

Qualification verifiers generally found that centres were using assessment material and methods which were valid, reliable, practicable, equitable and fair. However, it was in this criterion that the single action was raised at a centre which did not have a re-assessment paper that met the unit statement of standards in terms of the use of a different selection sample of knowledge and understanding points.

Recommendations for this criterion included: suggestions to widen the selection of GU2 project titles to provide greater diversity; making use of SQA's prior verification service when devising or amending assessments; and requiring candidates to record actual values when testing electrical circuits as is custom and practice industrially.

Criterion 4.4: Assessment evidence must be the candidate's own work, generated under SQA's required conditions.

All centres provided evidence that they have appropriate policies and procedures to maintain the integrity of the assessment process.

Criterion 4.6: Evidence of candidates' work must be accurately and consistently judged by assessors against SQA's requirements.

Centre evidence that was reviewed showed that assessment judgements were valid. An item of good practice was noted at one centre where, for the Graded Unit 1 paper, candidate scripts were double-marked then internally verified which helped enhance confidence in assessment judgements.

A number of recommendations were made:

- ◆ including in the marking scheme, or in the planned online records of standardisation meetings, the agreed cut-off level for re-submission/repair of a candidate's assessment attempt
- ◆ when marking multiple-choice questions, consider stipulating that, in all submissions, assessors and internal verifiers indicate correct and incorrect responses from candidates, as they do for written responses
- ◆ inserting typical written responses in the solutions versions of the workbook contained in the course folder to strengthen the evidence of a standard approach to marking

Criterion 4.7: Candidate evidence must be retained in line with SQA requirements.

As has been the case for a long time, all centres complied with this criterion. Most kept candidate evidence for a period longer than stipulated.

No recommendations were made for this criterion.

Criterion 4.9: Feedback from qualification verifiers must be disseminated to staff and used to inform assessment practice.

All centres complied with the requirements of this criterion. No recommendations were made.

Feedback from qualification verifiers was disseminated in a number of ways: through the sharing of reports electronically on shared access folders; discussion at meetings and quality assurance departments; extracting elements from reports and circulating these to appropriate staff.

Areas of good practice reported by qualification verifiers

The following good practice was reported during session 2018–19:

- ◆ 2.4 The active online tracking of any actions raised by the delivery team is considered good practice.
- ◆ 2.4 The inclusion of mandatory items in meeting agenda.
- ◆ 3.2 The course team's involvement in learner progress reviews.
- ◆ 3.2 The use of two people to interview applicants.
- ◆ 3.3 The use of the flexible attendance system to support candidates.
- ◆ 3.3 The 'engagement' flag used in the class register system. This can be used to aid early intervention for candidates who may be facing study difficulties.
- ◆ 3.3 The use of candidate-marking the exemplar project report is considered good practice, as is the effective use of the time available for delivery of the project: 1 hour/week in block 1, 2 hours/week in block 2 and 3 hours/week in block 3.
- ◆ 4.2 The formal written feedback given to the assessor by the internal verifier.
- ◆ 4.2 Independent marking of candidate submissions by assessor and internal verifier is considered good practice.
- ◆ 4.2 Thorough re-marking of scripts by the internal verifier.
- ◆ 4.3 Referencing tutorials being provided to all candidates, not just those in an associated degree group.
- ◆ 4.4 The formal documentation used to record poor candidate discipline.
- ◆ 4.6 HN GU1 double-marking then internal verification of the scripts has led to more secure assessment decisions.
- ◆ 4.6 The Exam Paper Review procedure.

Specific areas for development

The following areas for development were reported during session 2018–19:

- ◆ With regard to enhancing the clear indication of internal verification of candidate evidence, centres could specify in their appropriate policies and procedures the use by the internal verifier of a distinctive colour of ink.
- ◆ Centres could also be encouraged to include internal verification of all assessment instruments, including re-assessments, in their pre-delivery checklists, team meetings and associated policies and documentation.
- ◆ In unit F5HP 11 practical checklist, it is recommended that the candidate is required to record the actual test values for continuity and insulation resistance as is the practice in industry.