



National Units

Qualification Verification Summary Report 2019

**Mechanical and Manufacturing
Engineering**

Verification group: 212

Introduction

The following units were verified in 2018–19:

F5K1 11	Mechanical Engineering Principles
F5K2 11	Pneumatics and Hydraulics
F5K3 11	Power Drives
F5K4 11	Engineering: Prime Movers
F5FP 11	Graphical Engineering Communication
F5K8 12	Statics
F5KB 12	Dimensional Control
F5KE 12	Workshop Skills
F5JE 12	Thermofluids
F5K8 12	Statics
F5K6 12	Engineering Dynamics
F6X7 12	Mechanical Engineering Principles
F5JF 12	Engineering Thermodynamics

This session, three visits were undertaken for Mechanical and Manufacturing Engineering. The evidence reviewed at each centre was found to be appropriate and valid. Two visits resulted in the overall outcome being 'high confidence', the other initial outcome was 'broad confidence'. The centre subsequently met the required action and the evidence report raised the outcome to 'high confidence'.

Elements of good practice were noted in terms of preparing and inducting candidates (criterion 3.2) and retention of candidate evidence (criterion 4.7).

The action raised (criterion 4.2) was in regard to internal verification record keeping.

A recommendation (criterion 4.3) was made regarding the development of new instruments of assessment to enable centres to reduce their dependence on existing ASPs and exemplars.

Category 2: Resources

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

For each of the visits undertaken, verifiers reported that centres were carrying out appropriate reviews. In almost all cases these were evidenced by the completion of pre-delivery checklists, but some centres additionally minuted staff meetings at which resources, assessments and learning materials were reviewed. Almost all centres downloaded unit specifications and, where available, exemplar assessments/ASPs at the start of each session. Some added the session date to existing paper copies. Some centres made effective use of real-time computer-based course management tools.

Overall, this criterion has remained effectively applied by centres, although a recommendation was made to one centre to annually download unit specifications and ASPs.

Category 3: Candidate support

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

Almost all centres encourage online applications, with applicants invited to identify their aims and any additional support needs they may have. Typically, during induction, such applicants are introduced to the candidate support processes available at the centre. These processes are always available to candidates identifying additional needs post-enrolment.

The use of aptitude tests to establish applicant suitability and base knowledge level has proved beneficial.

From the small number of visits undertaken, it seems clear that centres are more often providing applicants and candidates with early notification of available support.

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

As is typical for National Units, centres formally timetable weekly guidance and/or support classes for all candidates. This helps ensure that regular contact and support is maintained for candidates.

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.

For each centre visited, the verifier judgement was that all instruments of assessment used were valid and were used appropriately.

Recommendations

Over time, centres should look to develop their own assessments. Use of ASP exemplars is perfectly acceptable, but often locally devised assessments can be better tailored to the centre's methods of delivery. SQA strongly recommends that any locally devised summative assessments be submitted for prior verification.

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

As required, all centres visited have appropriate policies in place which describe typical candidate transgressions and possible sanctions.

Where assessments are required to take place in controlled, supervised conditions then centres ensure that appropriate accommodation and staffing is provided.

Many centres require that coursework undertaken by candidates in their own time is submitted electronically via the centre's VLE and is automatically subject to review by anti-plagiarism software.

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

Assessment judgements at each centre visited were, overall, considered to be accurate and consistent. This position is fundamentally maintained historically.

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

All centres visited presented the evidence requested by the verifier and all retained candidate evidence in accordance with SQA requirements. Most centres retain the evidence for a longer period, though at some storage space limitations mean that physical evidence (for example, constructed assemblies or artefacts) is kept only for the minimum period stipulated.

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

Reports from all visits undertaken indicated that qualification verification reports are added to master folders (typically these are in electronic format) and discussed at team meetings. At some centres the quality department will extract qualification verification recommendations, and any good practice identified, and circulate these across the centre.

Areas of good practice reported by qualification verifiers

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

- ◆ 3.2 Individual learning plan for candidates to suit their needs and prior achievements — an individual candidate induction pack/booklet is issued to all candidates.
- ◆ 4.7 Retention of assessments evidence for a year — although not SQA policy, this is encouraged to ensure availability for internal verification, appeals etc.

Specific areas for development

The following area for development was reported during session 2018–19:

- ◆ Centres are encouraged to develop new assessments and not rely so much on exemplars and ASPs.