



**Higher National Qualifications
Internal Assessment Report 2013
Mechanical Engineering**

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

Higher National Units

General comments

All the centres that were visited in 2012–13 had a clear and accurate understanding of the requirements of the national standards in relation to the HN Mechanical Engineering Units.

The centres that were verified were all experienced in the delivery of these Units.

Unit specifications, instruments of assessment and exemplification materials

All assessors within the centres visited were familiar with the Unit specifications, instruments of assessment and exemplification materials relating to the Units delivered. Furthermore, all demonstrated a wide knowledge and experience of using and interpreting the course documentation and materials, embedding their experience within the Units taught.

All centres supplied details of course meetings in which staff shared ideas and good practice from within each department.

No centre visited in session 2012–13 was subject to a Hold on certification, confirming that all assessment decisions were reliable and valid.

Evidence Requirements

All centres visited during 2012–13 clearly demonstrated an understanding of the Evidence Requirements of all the Units to be delivered.

In all cases, the student materials were ready for verifying and were deemed to be of an appropriate standard.

Administration of assessments

The assessments used in centres were deemed to be of an appropriate level, with centres demonstrating robust control and administration of assessments.

Internal verification procedures across all centres that were visited demonstrated good control of assessments and materials. In all cases, robust internal verification systems were being employed to ensure all candidates' work met the national standards.

Further evidence was shown that a number of centres engaged in cross-marking or second marking of candidate evidence to ensure all work met the college internal verification procedures and national standards.

General feedback

All centres employed a variety of feedback mechanisms to ensure candidates gained feedback on their performance whilst on the course.

Due to the timing of the visits, some candidates were interviewed. All centres employed excellent access to their assessments and no barriers were identified during any visit.

Areas of good practice

Within all centres, the standard of the master folders was high. The numerous project-scope documents that were made available to the candidates prior to them undertaking the project had all been internally verified to ensure that there was enough academic content for the projects to proceed.

All centres provided detailed feedback to candidates during their work. A number of centres employed internally devised clear guidance to candidates on the requirements of the Graded Unit. In some instances there was excellent use of industrial projects to enhance the skills learned during the project, with centres providing appropriate staff with correct level of qualifications and industrial experience to assist the experience.

In a number of cases, all assessment papers that are used are signed by the IV as 'in-date and valid' and the verification documentation included notes from the previous standardisation meetings — confirming that there was a robust internal verification system in place.

A number of centres use supplementary notes, eg Engineering Council certificate-level supporting documents to enhance knowledge and understanding during the course.

In some centres, the use of simulation software such as 'Matlab' enhanced the learning experience, with students calculating the theoretical data and comparing with the actual results for the experiment; this enhanced the candidates' learning by introducing additional skills.

Specific areas for improvement

There are no specific areas for improvement identified this year. However, centres are encouraged to develop closer links with other colleges to utilise equipment and staffing to develop the curriculum in line with industry needs.

All centres should ensure that they have alternative instruments of assessment available at the time of verification visits.

Higher National Graded Units

Titles/levels of HN Graded Units verified:

DV11 34	Mechanical Engineering Graded Unit 1
DV12 35	Mechanical Engineering Graded Unit 2
DT9P 34	Thermofluids
DR1T 34	HN Statics and Strength of Materials
DR2D 34	HN Safety Engineering and the Environment
DR3L 34	HN Engineering Principles
DT9T 34	HN Dynamics
DR2D 34	Safety Engineering in the Environment
DV9G 34	Mechanical Engineering Principles
DR3I 34	Engineering Principles

General comments

All the centres that were visited in 2012–13 had a clear and accurate understanding of the requirements of the national standards in relation to the HN Mechanical Engineering Graded Units.

All centres that were verified were experienced in the delivery of these Units. Four centres had their work centrally verified in session 2012–13.

Unit specifications, instruments of assessment and exemplification materials

All assessors within the centres visited were familiar with the Unit specifications, instruments of assessment and exemplification materials relating to the Units delivered. All demonstrated a wide knowledge and experience of using and interpreting the course documentation and exemplification materials, and embedded their experience within the Units that they taught.

All centres supplied details of course meetings which indicated that staff shared ideas and good practice from within each department.

No centres visited in session 2012–13 were subject to a Hold on certification, thereby confirming that all assessment decisions were reliable and valid.

Evidence Requirements

All centres that were visited during 2012–13 clearly demonstrated an understanding of the Evidence Requirements for all the Units delivered.

In all cases, the student materials were ready for verifying and were deemed to be of an appropriate standard.

Administration of assessments

The assessments used in centres were deemed to be of an appropriate level, with centres demonstrating robust control and administration of assessments.

Internal verification procedures across all centres that were visited, indicated good control of assessments and materials. In all cases, robust IV systems were being employed to ensure all candidate work met the national standards.

Further evidence was shown that a number of centres engaged in cross-marking or second marking of candidates' evidence to ensure all work met the college IV procedures and national standards.

General feedback

All centres employed a variety of feedback mechanisms to ensure candidates gained feedback on their performance whilst on the course.

Due to the timing of the visits, some candidates were interviewed. All centres employed excellent access to their assessments with no barriers identified from any visit.

Areas of good practice

Within all centres the standard of the master folders was high. The numerous project-scope documents that were made available to the candidates prior to them undertaking the project had all been internally verified to ensure that there was enough academic content for the projects to proceed.

All centres provided detailed feedback to candidates during their work. A number of centres employed internally devised clear guidance to candidates on the requirements of the Graded Unit. In some instances there was excellent use of industrial projects to enhance the skills learned during the project with centres providing appropriate staff with correct level of qualifications and industrial experience to assist the experience.

In a number of cases, all assessment papers that are used are signed by the IV as 'in-date and valid' and the verification documentation included notes from the previous standardisation meetings — confirming that there was a robust internal verification system in place.

A number of centres use supplementary notes, eg Engineering Council certificate-level paperwork to enhance knowledge and understanding during the course.

In some centres, the use of simulation software such as 'Matlab' enhanced the learning experience with students calculating using theoretical data and comparing with the actual results for the experiment; this enhanced the candidates' learning by introducing additional skills.

Specific areas for improvement

There are no specific areas for improvement identified this year. However, centres are encouraged to develop further links with industry and other colleges to utilise equipment and staffing to develop the curriculum in line with industry needs.

All centres should ensure that they have alternative instruments of assessment available at the time of verification visits.