

NCFE Level 2 Certificate in Engineering Studies (601/4532/8)

Assessment window: 20 March – 31 March 2017

This report contains information in relation to the external assessment from the Chief Examiner, with an emphasis on the standard of learner work within this assessment window.

The aim is to highlight where learners generally perform well as well as any areas where further development may be required.

Key points:

- administering the external assessment
- standard of learner work
- Regulations for the Conduct of External Assessment – V Certs (Malpractice & Maladministration)
- referencing of external assessment tasks
- evidence creation
- interpretation of the tasks and associated assessment criteria
- planning in the external assessment.

It's important to note that learners shouldn't sit the external assessment until they've taken part in the relevant teaching of the unit to ensure they are well prepared for the external assessment.

Administering the external assessment

The external assessments must be independent from the teaching of the unit. Work completed during the teaching of the unit cannot be used in the external assessment. Any stimulus materials used by the centre during the teaching of the unit cannot be used in the external assessment. Learners must complete all of the tasks independently.

The completion of the timed tasks must be invigilated and sat in accordance with the [Regulations for the Conduct of External Assessment - V Certs](#).

Standard of learner work

The standard of work varied this window from hand drawn manual techniques through to the use of CAD drawing packages.

As a general rule, learners need to be encouraged to look at the assessment criteria tables, which are provided against each of the 3 tasks. This would enable aspects such as 'proportion' to be covered in more detail, raising understanding and grades for this criterion.

The use of templates as part of assessment set up by centres is not allowed, learners must produce their own layouts as this is a specific criterion assessed.

Regulations for the Conduct of External Assessment - V Certs

Malpractice & Maladministration

Centres are reminded of the policy documentation that is available from the NCFE website. Learners must work independently under supervised examination conditions during the assessment window. All work must be retained within the room and secured during breaks. Learners must be reminded of the regulations during the start of the assessment tasks.

Referencing of external assessment tasks

The assessment criteria are clearly visible for each task in a tabulated format taken directly from the qualification specification, and learners must be encouraged to refer to the grading criteria throughout the assessment to ensure that their answer fully meets the assessment criteria.

This is especially important for learners hoping to achieve Merit and Distinction grades where the descriptions used within the table indicate how to achieve the higher grading.

Evidence creation

Learners should use the answer booklet, using the spaces provided, to answer questions. Learners should be encouraged to fill all available spaces provided and request additional sheets if needed. Where answers are typed or additional pages included, the learner's name must be clearly visible and it must be clear which task the answer refers to. All individual sheets of paper submitted must contain the learner's name, candidate number and centre number so it is clear for the examiner.

One evidence creation issue that occurred regards the scaling on drawings, which appears to alter when the hardcopy is printed. Centres should perform checks to ensure that scaled drawings are accurately printed, so as not to disadvantage learners in this aspect of their assessment. If a centre discovers that this is the case, a supporting document must be provided by the centre for the examiner to reference against any scale queries. This window, one centre clearly indicated this effectively from a 2D dimensionally correct version to an out of scale 3D version using the same software. Without such a document examiners cannot fully support candidates.

Centres are reminded that it is their responsibility to ensure that hardcopy drawings are printed to the correct scale.

Interpretation of the tasks and associated assessment criteria

Task 1, A.C 1.1

Learners for this assessment criterion had to identify the 2 different systems of measurement on the provided sketches. Learners managed to identify 2 types of measurement systems correctly and named 2 types of measurements against each of these. The drawings did not need to be used for the later answers as any unit of measurement could be specified.

The following subtasks are for the awarding of the higher grades. Learners achieving a comparison (for example, U.S.A. versus European systems of measurement) were considered to be perceptive in their understanding of types of measurement systems.

Task 1, A.C 1.2

Learners had to identify how the item of equipment within each image can be used for the production of engineering drawings. A range of different types of equipment had been provided for identification. Many described how each is used in the production of drawings and drawing elements. Detailed explanations with examples of applications lifted grades into the merit and distinction level. This task performed well for all candidates.

Task 1, A.C 1.3

This assessment criterion task was the weakest area of the examination. Learners need to be taught what proportion is, using a formal definition followed by examples of good and bad proportions.

Where learners only described scale they left the second part of the assessment criterion evidence missing. Learners should be encouraged to fill in the whole of the available space provided for answers in this section. Some learners left the task blank, which results in a Not Yet Achieved status for this assessment criterion.

Tasks 2/3, A.C 2.1

The majority of centres used A3 media to produce copies of the Task 2 model that had to be drawn from the provided sketch. Some centres used A4, which is not suitable for learners to obtain the full level of evidence across a range of grades. Centres used both computer aided design and manual techniques in evidencing work against Task 2. Many learners did not notice the 'v' shaped bevel on the 2D sketch and elected to draw this vertically, failing to achieve this assessment criterion.

The layout of a 2D drawing needs to contain a 10mm border around the outside of the paper followed by a formal title block. Many learners did not take this approach, which centres need to develop as a standard. Some work was unidentified with no name, centre or candidate number, which creates problems for marking and awarding.

The layout of the position of the 2D plan view, side and end elevations is important. The positioning should reflect the amount of available space against the scale used. Many learners 'crammed' work into the space using full sized scales, which did not reflect well in producing a correct layout. Others placed their elevation around the outside of the media chosen.

Tasks 2/3, A.C 2.2

The majority of learners understood the transferring of the sketched dimensions into a scaled drawing. Some used a scale to position the drawing onto their sized media, others tried to draw this full size onto paper, which made the final appearance tight against the border.

Learners need to carefully consider their layouts by using simple construction lines or draft versions to ensure that the final drawing scale selected is correct. This would then fully support those areas of the assessment criteria from the unit where 'experimentation' is required to be evidenced. This can also be evidenced through learners showing hidden detail, a set of sequenced CAD slides or by a descriptive text with images. Centres where learners used CAD to produce drawings printed hardcopies of these to the correct scale indicated. Most learners correctly specified the scale that they had used within their title block.

Tasks 2/3, A.C 2.3

This task assesses the learner's accuracy and use of drawing tools and equipment. This is assessed by a scale check of both 2D and 3D drawings to ensure that the selected scale has been accurately produced. The drawn work around elliptical holes in 3D is also examined along with correct diameters in 2D. The learner's work needs to be clean, clear and free from smudges and rubbing out if manual techniques have been employed in the drawing production.

Experimentation can be demonstrated by the use of hidden detail lines, construction lines, draft copies of drawings, or sequences of slides captured as screen prints during CAD drawing production. The latter must contain some justifications in order to cross reference against assessment criterion 2.4. The use of shading and colour is also acceptable evidence of the use of experimentation in drawing production.

Tasks 2/3, A.C 2.4

Learners presented their final 2D and 3D drawings in either manual or CAD formats. The evidence in the process of production varied from simple construction lines indicated on manual drawings, draft copies and/or work plans, through to a complex sequence of screen shots. The latter also often had a commentary associated with it that described the process of drawing production.

Alongside the descriptions learners need to provide some justification as to why they used one process or critically judge this to access the higher grades.

Care should be taken with the 3D drawing where some learner's scales meant that their work fell off the page. Presentation skills should include a drawing that is clean, free from errors or rubbing out, contains dimension lines, fits well on the media used and is complete.

Planning in the external assessment

Centres are reminded to give due attention to the assessment windows of the external assessment. It is not advisable for learners to sit the external assessment early in their programme. It is far more appropriate to enter learners once they have taken part in the relevant teaching to ensure they are well prepared.

Centres would be in a better position to prepare their learners for the external assessment following the support of an external quality assurance visit for the internally assessed units.

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