

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

### Assessment window: Autumn 2019

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

The aim is to highlight where learners generally performed well, as well as any areas where further development may be required, described against each assessment criterion.

Key points:

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

It is important to note that learners should not sit the external assessment until they have taken part in the relevant teaching of the unit to ensure they are well prepared for the external assessment.

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### 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 .

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### Standard of Learner Work

Centres should make a judgment as to the ability of a candidate and decide if the level 2 is too high a level. Again centres appear to be entering candidates who do not have the skill levels for Level 2 and as such struggled to produce the higher standards required for this qualification. To contrast this some Level 2 learners were producing work at a Level 3 industrial standard demonstrating excellent technical drawing standards.

The computer aided design work produced for the 2D and 3D drawings has produced some very high levels of drawing ability. Candidates need to be encouraged to demonstrate the developmental work associated with the production of their drawings. Many chose to use screen shots of this process in support of the higher grades. Candidates need to provide critical judgment against such annotations,

stating reasons why they have used one process over another in order to lift grades into higher mark bands.

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## Malpractice & Maladministration

No cases of malpractice or maladministration have been raised during this assessment window. Centres are reminded of the rules of conduct for external examinations. 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.

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## Referencing of E0xternal 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. Centres should inform learners about the key verbs used within the grading tables to encourage higher order grades to be achieved.

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## Evidence Creation

Candidates should use the answer booklet, using the space provided, to answer questions. Where answers are typed or additional pages included, the candidates name must be clearly visible and it must be clear which task the answer refers to. Candidates ID numbers must be clearly evidenced on all work, along with the centre number in case any evidence becomes isolated.

All learners tended to use A3 sized paper for the submission of their hardcopy drawings. Printing an A3 drawing onto A4 paper in sections does not support the guidance provided within the examination. Candidate's hard copy work should be printed on the media size that they have selected.

Centres should be aware that the use of 'Solid Works' engineering CAD software has a known issue that it doesn't print accurately in 3D. Centres should perform checks to ensure that scaled drawings are accurate to not disadvantage learners for this aspect of their assessment.

## Interpretation of the Tasks and Associated Assessment Criteria

### Task 1 AC 1.1

Learners interpreted the two common systems of measurement, which were annotated within the provided image, and state two units of measurement against each. This was well evidenced by all candidates. Any appropriate units were given credit for example kilometers, miles.

The descriptive element in part c) varied. Some learners were not able to demonstrate a coherent explanation reinforced with examples. Learners described the use of metric for smaller dimensions and imperial for larger which reflects the annotation of dimensions on an engineers ruler. The task was looking for learners to distinguish between the two different systems in some detail with regard to location, country use of systems etc.

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### Task 1 AC 1.2

This task required that learners describe the use of each item pictured in the task table and provide a description of how it is used in engineering drawings. A range of correct descriptions lifted marks into higher bands. Clear descriptions of how each was used to draw gained higher marks.

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### Task 2/3 AC 1.3

This task requires learners to describe the purpose of scale and proportion. This assessment criterion has two chances within Tasks 2 and 3 to be awarded. Scale was better answered than proportion. Candidates need to describe proportion in terms of stretching out of axis dimensions in not reflecting real life examples.

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### Tasks 2/3, AC 2.1

Layout is a basic requirement of formally setting out a drawing. It involves the use of a border on all four sides, a title block, the positioning of the drawn objects on the paper and the form of projection used and stated.

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### Tasks 2/3, AC 2.2

Learners managed to select a scale that was appropriate to provide a level of detail in their drawings. However some centres appeared to only provide A4 printing which reduced learner's scales on the provided media. Some scales used resulted in parts of drawings hitting the layout border, which is a positioning issue.

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### Tasks 2/3, AC 2.3

Candidates need to evidence the accurate use of drawing tools. Within CAD this was judged by the dimensions in terms of replicating those within the sketch to size and proportion. Accuracy of drawing elliptical circles let some learners down in higher mark bands on the component. Experimentation is best demonstrated by the use of screen shots, which are annotated with *justification* statements by candidates if they are using CAD.

Manual techniques can demonstrate experimentation by the use of construction lines, hidden detail, shading and draft copies of drawing or planning layout sketches. Draft copies of drawing planning also supported this criterion.

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### Tasks 2/3, AC 2.4

The overall standard of presentation skills was well attempted by learners. One drawing is required to be dimensioned which most achieved. Title blocks tended to be placed horizontally across the base of the drawing and not formally at the bottom right hand side. Learners names and registration numbers should be placed within a title block and not hand drawn onto presentations. There was no evidence of any scale printing issues this series.

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### Planning in the External Assessment

Centres are reminded that January 2020 is the last opportunity within the performance tables to complete the externally assessed unit.

**Chief Examiner: Simon A Topliss**

**Date: Autumn 2019**