

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

Assessment window: Autumn 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.

Standard of learner work

The standard of candidates work continues to grow in quality this series. The use of computer aided design software is the medium of choice in the majority. Manual drafting techniques have equally improved in the development of quality drawings. Centres have clearly read previous chief examiners reports and implemented the advice and guidance provided into delivery of CAD and manual drawing techniques used within engineering.

Where learners chose to produce their drawings by using a computer aided design package, Centres are reminded that templates for layout need to be produced by learners independently, and not to use templates from within the software package.

The computer aided design work produced for the 2D and 3D drawings was, overall, of a good quality. Candidates need to be encouraged to demonstrate the developmental work associated with the production of their drawings to achieve the higher grades. Many learners chose to provide screen shots of this process to achieve this. However, screen shots are not an acceptable method of evidencing final drawn work as they are not scalable, lack clear detail, and will not support the requirements of the assessment criteria.

Candidates should be directed to the higher order grading criteria and the descriptive verbs within these to understand what is required to achieve these assessment criteria. It is important to note that no answers will be cross-referenced, highlighting the importance of answering every question. However positive marking is used where insufficient evidence exists against assessment criteria. Any unanswered questions will result in a Not Yet Achieved (NYA) for that assessment criteria and an overall Not Yet Achieved for the unit.

Candidates should be encouraged where applicable to ask for additional sheets to be attached to their examination papers where they wish to expand on a particular aspect of their evidence. Where assessment criteria state justification or critical judgement then examiners will be looking for candidates to explain reasons behind decisions they have made in the production of their drawings.

Regulations for the Conduct of External Assessment - V Certs

Malpractice & Maladministration

Centres are reminded of the regulations documentation that is available from the NCFE website. Learners must work independently under invigilated examination conditions in line with the NCFE Regulations for the Conduct of External Assessment for all three tasks within the external assessment.

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 these 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 space provided, to answer questions. Where answers are typed or additional pages included, the learners name must be clearly visible on each page and it must be clear which task the answer refers to.

The majority of learners used 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.

An issue that occurred several times this window was related to the scaling on drawings appearing to have altered when the hardcopy is printed. This is especially prevalent with the use of Solid Works engineering CAD software, where this is a known issue. 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 systems of measurement in defining and providing examples of units against each system. Centres need to ensure that they provide adequate coverage of this curriculum element, as many learners failed to achieve this assessment criteria due to avoidable, simple mistakes. Learners made simple interpretation errors in not defining two systems correctly. Citing examples of each system helps with the identification and applying this in a country context aids higher mark awarding.

Task 1, AC 1.2

This task performed well with the majority of candidates achieving a pass grade and above. Descriptions need to include how the identified piece of equipment is used for the production of engineering drawings. For example, how a micrometer is used to take dimensions and record these for transferring to digital media.

Task 1, AC 1.3

The task this year was separated into two parts in order to support learners in their weak understanding of proportion.

Centres need to develop some engaging materials in the delivery of proportion as the weaker element led to many Not Yet Achieved outcomes. It was clear that many candidates appeared not to understand proportion.

Centres need to develop and deliver materials around the application of proportion within an engineering drawing context so that they are able to explain in detail what proportion is and how it is featured within a drawing, citing examples. Candidates need to develop the use of explanation and descriptions of what proportion is and how it distorts scale. This would improve the area of weakness that has appeared within this series.

Tasks 2/3, AC 2.1

Candidates need to observe the application of correct drawing standards, and the use of layout in the presentation of 2D and 3D using a specified method of projection within their title block. Presentation of 3rd or 1st angle projection needs to be correctly laid out, demonstrating experimentation. This could be in the form of hidden detail, construction lines, shading, or transfer lines.

Three dimensional drawings need to follow a known method of stated projection and not rotated out of this and printed in an obscure view (if for example they were using Google Sketchup).

Tasks 2/3, AC 2.2

Candidate's use of scale must be accurate. Interpretation from the given sketch information needs to be correctly transferred into a formal drawing. Practice at accomplishing this will increase accuracy.

Appropriate scales need to be used to ensure the best fit on the media size selected by the candidates. Many ran out of space and their drawing was truncated as it fell off the page.

Tasks 2/3, AC 2.3

Candidates need to evidence the accurate use of drawing tools. Pre-prepared drawing guides or frameworks should not be provided for learners, as to do so contravenes NCFE regulations for the conduct of external assessments.

Tasks 2/3, AC 2.4

The use of 3D and 2D grid pre-printed paper is not allowed for the production of learner drawings.

Centres should not provide screen prints of completed learner drawings. Final drawings must be printed at the indicated scale onto A3 or A4 paper.

Centres should be aware that there are known issues relating to accurate printing of scale in the software Solid Works. Centres are reminded that it is their responsibility to ensure accurate, scaled printed drawings are submitted for examiners to mark.

Centres should not print an A3 formatted drawing onto A4 paper in sections, as this is detrimental to learner's evidence.

Experimentation should be evidenced through the use of screen prints with an annotated commentary, or through annotated sheets applied to manual drawings that give reasons why a process or procedure has been used.

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 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 moderation visit for the internally assessed units.

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Date: January 2018