OCR
Oxford Cambridge and RSA

CAMBRIDGE TECHNICALS LEVEL 2 (2016)

Moderators' report

ENGINEERING

05887, 05888

Summer 2024 series

Contents

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Introduction

Our Moderators' reports are produced to offer constructive feedback on centres' assessment of moderated work, based on what has been observed by the moderation team. These reports include a general commentary of accuracy of internal assessment judgements, identify good practice in relation to evidence collation and presentation and comment on the quality of centre assessment decisions against individual Learning Objectives. The report also highlights areas where requirements have been misinterpreted and provides guidance to centre assessors on requirements for accessing higher mark bands. Where appropriate, the report will also signpost other sources of information that centre assessors will find helpful.

OCR completes moderation of centre-assessed work in order to quality assure the internal assessment judgements made by assessors within a centre. Where OCR cannot confirm the centre's marks, we may adjust them in order to align them to the national standard. Any adjustments to centre marks can be viewed on the Interchange claim once processed by the moderator. Centres should also refer to their individual centre report provided after moderation has been completed. In combination, these centre-specific documents and this overall report should help to support centres' internal assessment and moderation practice for future series.

Online courses

We have created online courses to build your confidence in delivering, marking and administering internal assessment for our qualifications. Courses are available for Cambridge Nationals, GCSE, A Level and Cambridge Technicals (2016).

Cambridge Nationals

All teachers delivering our redeveloped Cambridge Nationals suite from September 2022 are asked to complete the Essentials for the NEA course, which describes how to guide and support your students. You'll receive a certificate which you should retain.

Following this you can also complete a subject-specific Focus on Internal Assessment course for your individual Cambridge Nationals qualification, covering marking and delivery.

GCSE, A Level and Cambridge Technicals (2016)

We recommend all teachers complete the introductory module Building your Confidence in Internal Assessment, which covers key internal assessment and standardisation principles.

Following this you will find a subject-specific course for your individual qualification, covering marking criteria with examples and commentary, along with interactive marking practice.

Accessing our online courses

You can access all our online courses from our teacher support website [Teach Cambridge](#).

You will find links relevant to your subject under Assessment, NEA/Coursework and then Online Courses from the left hand menu on your Subject page.

If you have any queries, please contact our Customer Support Centre on 01223 553998 or email support@ocr.org.uk.

General overview

Communication with centres and allocated moderators should be as early as possible at the start of the academic year, to arrange potential dates for visits, and enable centres to set appropriate deadlines for their candidates for qualifications being delivered. Centres can build claims within Interchange before submitting their claims. These claims should be entered at least 10 working days before the moderation visits to allow time for sampling and uploading of required samples. Centres should also make sure all required files and candidate samples are uploaded to the Assessment Specialist File Access (ASFA) portal at least three days before the moderation visit. OCR will send a Teams link to both centre and moderator before the visit date.

There are a number of guidance documents and supporting forms which can be located on the OCR website for the Level 2 Cambridge Technical in Engineering and Teach Cambridge, covering uploading files, documenting candidate assessments and qualification requirements.

At each visit, centres are required to provide a completed Unit Recording Sheet (URS) for each candidate that clearly shows were the candidate has addressed each grading criteria, along with the final grade that is entered on Interchange. The URS should also include clear page referencing to identify work that centre assessors feel meet the particular grading criteria that has been awarded, along with supporting comments related to evidence produced. This can also be supported with suitable annotation in the candidate's portfolio. The URS should be uploaded onto the ASFA portal into the relevant candidate folder before the virtual moderation date.

OCR support – Internal Verification and Standardisation

ⓘ Centres are encouraged to conduct Internal Verification (IV) of assignment briefs, if they are set by centre. They should also conduct Internal Standardisation when assessing candidates' evidence (OCR have produced sample documents that the centres could use). Where this had been carried out in centres, it clearly demonstrated consistent and accurate assessment of candidate evidence and helped in the moderation process. It must be noted that the IV document is intended as feedback to the assessor on the assessment of candidates' evidence.

[Information on the OCR website about Administration](#)

OCR support – Meaningful employer involvement (MEI)

ⓘ This is a requirement from DfE for all awarding bodies 'to confirm that providers have secured employer involvement for every learner' taking a Tech level qualification or a Technical Certification qualification that has been approved by DfE. This refers to all Cambridge Technical qualifications except (05823) at both Levels 2 and 3. The employer involvement does not contribute to the overall qualification grading, but it is a requirement that all students must meet.

[Information on the OCR website about Meaningful employer involvement (MEI)](#)

Witness statements

Centres are encouraged to use witness statements to support candidates' work, noting that these cannot be used as a single source of evidence against grading criteria. There are a number of units where these forms can further corroborate candidates' effective tool use, testing, machining processes, and safe and independent working. Witness statements should be individualised and referenced to candidates.

Referencing

All candidates must be encouraged to reference their work. This could be as simple as footnotes on each page, showing the source material used along with numbered annotation within the work which should reference to particular grading criteria covered by the candidate's evidence.

Authentication

It is important that each candidate provides a completed authentication statement for their work and understand the importance of authenticity in the evidence they are presenting. Centres only need to supply one authentication statement per candidate, covering all units they are submitting.

Comments on individual units

Unit 3 – Mechanical engineering – machine operations

Candidates have produced photographic evidence for this unit. All photographic evidence must have annotation that clearly identifies the activity and what grading criteria it relates to. Within the Merit and Distinction grading criteria the candidates must produce in-depth explanations and evaluations of the practical activities they have carried out. Candidate evidence for Merit and Distinction criteria should be more explicit within presented portfolios.

As this a practical-based unit, the use of a witness statement to enhance the evidence is useful but only as support evidence and should be individualised to indicate support and help given to candidates.

Unit 4 – Electrical, electronic engineering – operations and application

Candidates' portfolios contained both written and photographic evidence for this unit. All photographic evidence must have annotation that clearly identifies the activity and what grading criteria it relates to.

Candidates attempting Merit and Distinction criteria must explain in detail their construction techniques to construct circuits, explain test procedures to establish functionality (possible use of test schedule template to support P7, M2 and support evaluations for D1) and present in-depth evaluations of their circuit construction and functionality; photographic evidence alone will not meet criteria.

As this a practical-based unit, the use of a witness statement to enhance the evidence is useful but only as support evidence and should be individualised to indicate support and help given to candidates.

Unit 5 – Engineering systems control – operations and application

This unit was only presented for moderation by a limited number of centres. The candidates used photographic evidence to demonstrate the practical activities with well annotated notes attached to photos which were referenced to the grading criteria. Samples presented for moderation showed good detail across the awarded criteria, showing candidates had understanding of the automated programmable system. There was clear evidence of programming, use of block diagrams and coding. Some candidates described the architecture of applications for programmable devices, had evidence of enhancing constructed system to improve, and implemented the transfer of program to system. The Merit criteria addressed could be more detailed. Those candidates that addressed the Distinction criteria had evidence of annotated design solutions with justification, although these could be extended in detail and also have had evidence of interpretation and documentation of testing showing corrections required. Centres also included a witness statement to provide support evidence for activities undertaken by candidates.

Unit 6 – Develop and present engineering 2D and 3D design solutions

Again, only a limited number of centres submitted this unit for moderation. Candidates used CAD software and freehand drawing techniques to produce evidence for this unit. Candidates provided screen shots and scanned work to support the awarded criteria, there was good use of CAD software to create both 2D and 3D drawings that were well proportioned and dimensioned, and some candidates showed

clear enhancements of designs. Candidates must provide clear annotation on all their drawings, both 2D and 3D, to indicate what grading criteria their evidence refers to.

There is no limit on the number of 2D and 3D drawings candidates can produce, but the drawings must be clearly related to the grading criteria. Those that attempted the Distinction criteria did explain how the features used enhanced the models and had evidence of evaluations of the benefits of using CAD to produce engineering drawings. These could be more in-depth.

Supporting you

Teach Cambridge

Make sure you visit our secure website **Teach Cambridge** to find the full range of resources and support for the subjects you teach. This includes secure materials such as set assignments and exemplars, online and on-demand training.

Don't have access? If your school or college teaches any OCR qualifications, please contact your exams officer. You can forward them this link to help get you started.

Reviews of marking

If any of your students' results are not as expected, you may wish to consider one of our post-results services. For full information about the options available visit the OCR website.

Keep up-to-date

We send a monthly bulletin to tell you about important updates. You can also sign up for your subject specific updates. If you haven't already, sign up here.

OCR Professional Development

Attend one of our popular CPD courses to hear directly from a senior assessor or drop in to a Q&A session. Most of our courses are delivered live via an online platform, so you can attend from any location.

Please find details for all our courses for your subject on **Teach Cambridge**. You'll also find links to our online courses on NEA marking and support.

Signed up for ExamBuilder?

ExamBuilder is a free test-building platform, providing unlimited users exclusively for staff at OCR centres with an Interchange account.

Choose from a large bank of questions to build personalised tests and custom mark schemes, with the option to add custom cover pages to simulate real examinations. You can also edit and download complete past papers.

Find out more.

You will need an Interchange account to access our digital products. If you do not have an Interchange account please contact your centre administrator (usually the Exams Officer) to request a username, or nominate an existing Interchange user in your department.

Online courses

Enhance your skills and confidence in internal assessment

What are our online courses?

Our online courses are self-paced eLearning courses designed to help you deliver, mark and administer internal assessment for our qualifications. They are suitable for both new and experienced teachers who want to refresh their knowledge and practice.

Why should you use our online courses?

With these online courses you will:

- learn about the key principles and processes of internal assessment and standardisation

- gain a deeper understanding of the marking criteria and how to apply them consistently and accurately

- see examples of student work with commentary and feedback from OCR moderators

- have the opportunity to practise marking and compare your judgements with those of OCR moderators

- receive instant feedback and guidance on your marking and standardisation skills

- be able to track your progress and achievements through the courses.

How can you access our online courses?

Access courses from Teach Cambridge. Teach Cambridge is our secure teacher website, where you'll find all teacher support for your subject.

If you already have a Teach Cambridge account, you'll find available courses for your subject under Assessment - NEA/Coursework - Online courses. Click on the blue arrow to start the course.

If you don't have a Teach Cambridge account yet, ask your exams officer to set you up – just send them this link and ask them to add you as a Teacher.

Access the courses **anytime, anywhere and at your own pace**. You can also revisit the courses as many times as you need.

Which courses are available?

There are **two types** of online course: an **introductory module** and **subject-specific** courses.

The introductory module, Building your Confidence in Internal Assessment, is designed for all teachers who are involved in internal assessment for our qualifications. It covers the following topics:

- the purpose and benefits of internal assessment

- the roles and responsibilities of teachers, assessors, internal verifiers and moderators

- the principles and methods of standardisation

- the best practices for collecting, storing and submitting evidence

- the common issues and challenges in internal assessment and how to avoid them.

The subject-specific courses are tailored for each qualification that has non-exam assessment (NEA) units, except for AS Level and Entry Level. They cover the following topics:

- the structure and content of the NEA units

- the assessment objectives and marking criteria for the NEA units

- examples of student work with commentary and feedback for the NEA units

- interactive marking practice and feedback for the NEA units.

We are also developing courses for some of the examined units, which will be available soon.

How can you get support and feedback?

If you have any queries, please contact our Customer Support Centre on 01223 553998 or email support@ocr.org.uk.

We welcome your feedback and suggestions on how to improve the online courses and make them more useful and relevant for you. You can share your views by completing the evaluation form at the end of each course.

Need to get in touch?

If you ever have any questions about OCR qualifications or services (including administration, logistics and teaching) please feel free to get in touch with our customer support centre.

Call us on
01223 553998

Alternatively, you can email us on
support@ocr.org.uk

For more information visit
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