**OCR**
Oxford Cambridge and RSA

CAMBRIDGE TECHNICALS LEVEL 3 (2016)

# Moderators' report

# IT

## 05838–05842, 05877

**Summer 2024 series**

# Contents

---

**Would you prefer a Word version?**

Did you know that you can save this PDF as a Word file using Acrobat Professional?

Simply click on **File > Export to** and select **Microsoft Word**

(If you have opened this PDF in your browser you will need to save it first. Simply right click anywhere on the page and select **Save as . . .** to save the PDF. Then open the PDF in Acrobat Professional.)

If you do not have access to Acrobat Professional there are a number of **free** applications available that will also convert PDF to Word (search for PDF to Word converter).

---

# 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](mailto:support@ocr.org.uk).

# General overview

The Level 3 Cambridge Technicals in IT qualifications are for 16-19 year olds and aims to develop their skills and understanding within the area of IT, equipping them with the potential to progress to higher education, apprenticeships, or employment. There is a wide range of centre-assessed, externally moderated units with contain both practical and wider project-based assessment opportunities. The diplomas within the suit relate to vocational pathways that candidates can follow.

## Comments on individual units

The aim of this unit is to broaden the knowledge and understanding of the wider potential of mobile technologies and its consequences to people and businesses. It is an optional unit within the Tech Level Diplomas for Emerging Digital Technology Practitioner, Application Developer and IT Infrastructure Technician pathways.

The number of centres delivering this unit has continued to increase with many candidates providing some very good and interesting evidence where they have conducted wider research into businesses that use mobile technology and how they have used it. This has provided them with a good foundation when investigating business contexts where mobile technology is limited or not yet implemented and therefore provide some very realistic solutions.

LO1: understand mobile technologies

Candidates whilst producing good evidence for P1 where they describe the different methods of mobile device connectivity, still do not fully compare and contrast the different operating systems used within mobile technology (M1). The candidates are required to compare the similarities and contrast the differences. They should also focus on the characteristics of each operating system and consider those that are shared or opposing. A good method for doing this, is for candidates to provide a summative conclusion at the end. Often moderators are presented with tables divided into similarities and differences but no conclusion is drawn from it. Candidates need to ask the question "what does this mean? is one operating system better thank another? etc."

For D1, candidates are required to evaluate the suitability of mobile technologies for different situations. Moderators have reported only seeing one type of mobile technology referred to and only one situation. It is important to note the terms used within the assessment criteria such as mobile technologies (more than one) and different situations (more than one).  There is also an issue with some candidates describing or explaining as opposed to carrying out an evaluation.  An evaluation requires the candidates to make a qualitative judgement considering different factors and use available knowledge and research evidence. A short paragraph is not an evaluation and does not provide the depth and breadth required to achieve D1.

LO2: be able to investigate how businesses use mobile technologies

# Unit 12 – Mobile Technology

Candidates are required to carry out research on the impacts mobile technologies have on businesses. It is important to note the criterion refers to impacts, technologies and businesses and this means more than one. It has been noted that some candidates have only considered one business, and one type of mobile technology. It is important that candidates research more than one business and the different types of mobile technology in use. If candidates researched different types of businesses in different sectors, it would provide them with the breadth and depth required to consider a wider range of technologies and the different types of impacts. This will then provide them with further information that they can also use to consider the ethical implications that are involved.

LO3: be able to determine solutions for the use of mobile technologies

It is important that candidates are provided with a specific business context that allows them to investigate mobile technological requirements that will meet business requirements. The requirements of the business should also be made clear e.g. to improve customer service. They should identify the business and give some background as to the functions of the business at the beginning of their evidence in order to 'set the scene.' When planning the solution, it is important that candidates document all aspects of the planning and referring to the teaching content can assist with this. They should also consider any existing technologies that may be used within the business as part of their planning strategy.

LO4: be able to present solutions for the use of mobile technologies

It is important that there is clear evidence of the candidate actually promoting their solutions to stakeholders and gathering feedback. This feedback should then be used to improve their proposed solution. Many candidates provide evidence of their presentation slides and video evidence of the presentation. Within the presentation, they have also incorporated the requirements for D2 by predicting the effectiveness of the proposal as part of their presentation to the stakeholders. Whilst the evidence overall is good, moderators report that there are still a number of candidates who are overloading their presentation slides with text (as opposed to using the speaker notes section) and this reduces the effectiveness of the presentation of the proposal. The evidence can be in the form of a formal proposal business document that would be issued to the stakeholders within the business to review. Feedback from the stakeholders should be documented in someway by the candidates and then a revised proposal for the mobile technological solution also developed as part of the evidence. Moderators cannot assume that because presentation slides have been developed that the proposal has actually been delivered to the stakeholders or feedback provided.

---

### Compare and contrast

Compare – shows how two or more things are alike or the same.

Contrast - shows how two or more things are different.

An evaluative, summative conclusion at the end summarising the main points of the comparison and contrast reinforces the candidates understanding.

---

### OCR support

i OCR have provided a document called "command verbs definition." This can be provided to candidates to helps them understand the breadth and depth of responses required for the various command verbs used within the specification.

> ### Assessment for learning
>
> Candidates should be encouraged to understand the most appropriate time to create presentation slides and that using them instead of writing a report e.g. about the different methods of mobile device connectivity is not appropriate. They should also be encouraged to use appropriate bullet points and images on slides and use the speaker notes to incorporate the detail that they would provide during the presentation.

## Unit 17 – Internet of Everything

This unit is about the use of the internet and the impact it has on society and people. Candidates will learn about the Internet of Everything (IoE) and how it is used. Candidates are required to carry out a feasibility study for a potential idea on the extension of the IoE.

This is an optional unit within the extended certificate and the Tech Level Diploma for all of the specialist pathways as the Internet of Everything is used everywhere and is constantly expanding.

LO1: understand what is meant by the Internet of Everything (IoE)

Overall, this has been done well by the majority of candidates. The only noted weaknesses has been with the depth of evidence provided for M1 and D1. This is due to candidates not providing sufficient evidence to meet the demands of the command verbs for analyse and evaluate.

Candidates are required to analyse the global impacts of the IoE on society and the environment. Candidates will tend to describe or possibly explain the impacts, but they do not demonstrate an analysis. In order to address the verb analysed, candidates should show that they have examined the global impacts of the IoE on society and the environment in detail and drawn conclusions from their analysis. An example could be where a candidate refers to the use of "Smart Grids" that are used to improve energy distribution and management and at the same time reducing waste and enhancing sustainability.  Another example would be the increase in electronic waste. This is one of the negative impacts on the environment due to rapid technological advancements and increased production of IoE devices. This has therefore increased e-waste which in turn poses disposal and recycling challenges.

LO2: be able to repurpose technologies to extend the scope of IoE

The IoE is rapidly developing and some candidates are suggesting repurposing ideas that have already been implemented. There have also been some very interesting and innovative ideas put forward by candidates who have given a lot of thought to what is already available, how it is used and how it could be repurposed to meet other demands. It should be noted that P3 asks candidates to outline potential development projects. This means that they should outline at least two potential development projects.

These can be variations of the same context or two entirely different ideas. For M2, candidates are required to carry out a feasibility study for one of the project ideas. Where candidates have used the feasibility template document within the OCR project management toolkit, the feasibility studies have been comprehensive and well documented covering all aspects of the study.

LO3: be able to present concept ideas for repurposed developments

Candidates are required to develop a business proposal for the chosen development project and deliver it to stakeholders. On receiving feedback from the stakeholders, there should be evidence of the candidates revising their business proposals. This was carried out well by many candidates who produced presentation slides and video recordings of delivering their proposed idea. Within video evidence, the feedback from the stakeholders is invariably included. However, where this is not the case, or the candidate has not provided video evidence of their presentation, it is important that the feedback they are given is documented in some way and that the revised proposal is also made available.

For D2, candidates are required to evaluate the success criteria that would be used to judge the sustainability of the chosen development project. Candidates should be encouraged to consider measurable success criteria during the feasibility and proposal stages. This would then be in a more informed position to be able to carry out an evaluation. Some candidates were awarded D2, when they had not provided an evaluation but described what the success criteria would be.

---

**Evaluation of success criteria**

An evaluation of success criteria involves assessing whether specific predefined goals or standards have been met within a project, initiative, or process. These criteria are established at the outset to provide a clear framework for measuring progress and determining the effectiveness or success of the project.

---

## Unit 18 – Computer systems - hardware

This unit is to enable candidates to understand how the components of computer systems work together. They will develop the skills required to recommend appropriate hardware systems for a variety of business purposes. Candidates will then be required to build/upgrade a full computer system, test the functionality and recommend preventative maintenance procedures. It is an optional unit within the Tech Level Diplomas for IT infrastructure technician and emerging digital practitioner pathways.

This is an ideal unit to be combined as a much larger project with Unit 19 computer systems – software. Many centres delivering this unit have provided candidates with the opportunity to build computer systems either from scratch or through the addition of upgrading/replacing hardware components. Overall, this unit has been done well by candidates with some very useful video evidence of candidates carrying out the installation and providing an audio or text narrative.

LO1: understand the components of a computer system

Most candidates produce a report where each component is explained with respect to its functionality within a computer system supported by images. Centres must ensure that candidates do not merely copy and paste information from websites but use their own words to provide the explanations.

The only real area of weakness for some candidates is for M1 where they are required to compare and contrast different hardware storage devices. These candidates have described the storage devices and stated their similarities and differences but not finalised the information by producing a conclusive summary. See the comments within Unit 12: mobile technology as the same issues apply.

LO2: be able to propose computer systems for identified business requirements

It is important that candidates are provided with a clear context that provides information relating to the business, the business purpose and what it requires for the computer system. Candidates should then select the components that would be required to build or upgrade a system to meet these business requirements. For D1, candidates extend this information by justifying why the components they have chosen meet the requirements of the business.

A number of candidates have submitted presentation slides that are overloaded with text instead of using a report format which would provide a more structured and appropriate layout.

LO3: be able to build or upgrade computer

This is a very practical activity and candidates must provide evidence of carrying out the installation of different hardware components. Strong evidence from candidates includes a job sheet indicating the components to be installed along with detailed annotation of photographs and videos. Witness testimonies, whilst acceptable, must be detailed and individual for each candidate. It is not sufficient to say that the candidate installed a number of components successfully. When addressing M2 for the recommendation of preventative maintenance activities, candidates have produced tables with detailed information in each of the columns or a report. The majority of candidates have carried this particular activity out well and then provided video or annotated photographic images of implementing these activities to meet the requirements for P5.

LO4: be able to test and evaluate the functionality of computer systems

For P6, candidates are required to develop a detailed test plan where they have included a wide range of tests to test the functionality of the computer system. More able candidates have identified where issues have arisen and documented the re-testing. It is important that candidates provide a strong level of detail on their test plans. This should include at a minimum the test number, what is being tested, how it is being tested, the expected result, the actual results, issues that arose (if any), resolution for the issue and reference to the re-testing number within the test plan. It is not necessary for candidates to provide a plethora of screenshots to confirm the testing.

More candidates are accessing the high grades by selecting and implementing benchmarking activities. Many of these activities have involved the installation of software which can be used towards the evidence for Unit 19. It is important that candidates make it clear what the benchmarking activities are, how they are being performed and the results being produced. As with the installation some candidates have provided strong evidence through the use of video or annotated images and printouts or screenprints of results. Candidates have then gone on to analyse the results of these benchmarking activities and not only explaining the results but also how it ensures that the installation results in the computer system meeting the original business requirements.

---

**Assessment for learning**

Candidates should be given a realistic context to enable them to demonstrate that they could effectively select and install appropriate hardware components as if they were working in industry.

      

# Unit 19 – Computer systems - software

This unit assists in the development of the knowledge, skills and understanding required by candidates to install and/or upgrade a wide range of software. The software can include operating systems and application software. Candidates will be able to select and use appropriate utility software to carry out a range of maintenance activities. This unit is also an optional unit within the Tech Level Diplomas for IT infrastructure technician and emerging digital practitioner specialist pathways. The majority of candidates also submit evidence for Unit 18 as it works very well combined with a larger project.

As with Unit 18, candidates have submitted some very good evidence for this unit, especially where the evidence has included, a detailed plan for the installation/upgrade, video or annotated screenshots/photographs and detailed test plans including the use of a wide range of utility software for the maintenance activities.

LO1: understand different software installations and their purpose

Many candidates have produced some strong evidence including detailed reports with supporting images. Unfortunately, there are far too many candidates who use presentation slides overloaded with text when a report would be more appropriate. Nonetheless the content has been sufficient to confirm the assessment criteria claimed. Candidates have explained the purposes of different system software and compared their features and functions. Candidates have successfully outlined the different types of application software and how end users use them. There has been some good evidence seen where candidates have described a wide range of reasons for the installation and/or upgrading of software.

LO2: be able to implement software installations and upgrades to meet specified user requirements

Centres are reminded that candidates should be given a specific context to work through that reflects practice in industry. It is not just a case of being able to prove that they can install/upgrade software. Where evidence has been weak, it is due to candidates not being given a strong context.

Some work plans were weak and it is important that candidates fully understand that a work plan includes how to secure any data that may be on the system, the compatibility of the software they intend to install/upgrade and if appropriate the use of backup and/or system restore points. This can then allow candidates to provide the justification more effectively for the considerations they have made in their workplans.

Where candidates have provided video or detailed annotated photographs/screenshots, the evidence has been strong. A witness testimony in isolation cannot be accepted as the only form of evidence for the installation/upgrading of software. In addition, witness testimonies must be detailed, provide the context and individual for each candidate.

Most candidates provided very good, detailed test plans supporting the installation/upgrades carried out including evidence of re-testing.

LO3: be able to conduct system maintenance using utility software

Many candidates provided detailed maintenance plans identifying not only the activities, but the planned timescales and good rationale for why they should be implemented. Further annotated screenshots and/or videos were used to provide evidence of the implementation of the various maintenance activities.

Some candidates provided a weak evaluation of the system post maintenance activity implementation. They tended to describe the results but not actually evaluate how the activities had improved the system.

## Assessment for learning

When providing evidence for the evaluation of the implemented maintenance activities, candidates should not only analyse the results, but compare the results with known benchmarks, identify if there are any issues and what the potential resolutions could be and any future considerations.

## Assessment for learning

Candidates should be given a realistic context to enable them to demonstrate that they could effectively select and install/upgrade appropriate software components as if they were working in industry.

# 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.