

Level 3 Advanced Technical Diploma in Architectural Joinery (7906-31)

March 2018 Version 1.2

Guide to the examination

Document version control

| Version and date | Change detail | Section |
|---------------------------------|--|---------------------|
| 1.1 March 2018 | <ul style="list-style-type: none">• Examination duration updated | Details of the exam |
| 1.2 June 2019 | <ul style="list-style-type: none">• Amendment to number of resit opportunities | Details of the exam |

Who is this document for?

This document has been produced for centres who offer **City & Guilds Level 3 Advanced Diploma in Architectural Joinery**. It gives all of the essential details of the qualification's external assessment (exam) arrangements and has been produced to support the preparation of candidates to take the exam/s.

The document comprises four sections:

1. **Details of the exam.** This section gives details of the structure, length and timing of the exam.
2. **Content assessed by the exam.** This section gives a summary of the content that will be covered in each exam and information of how marks are allocated to the content.
3. **Guidance.** This section gives guidance on the language of the exam, the types of questions included and examples of these, and links to further resources to support teaching and exam preparation.
4. **Further information.** This section lists other sources of information about this qualification and City & Guilds Technical Qualifications.

1. Details of the exam

External assessment

City & Guilds Technical qualifications have been developed to meet national policy changes designed to raise the rigour and robustness of vocational qualifications. These changes are being made to ensure our qualifications can meet the needs of employers and Higher Education. One of these changes is for the qualifications to have an increased emphasis on external assessment this is why you will see an external exam in each of our Technical qualifications.

An external assessment is an assessment that is set and/or marked by the awarding organisation (ie externally). All City and Guilds Technical qualifications include an externally set and marked exam. This must be taken at the same time by all candidates who are registered on a particular qualification. We produce an exam timetable each year. This specifies the date and time of the exam so you can plan your delivery, revision and room bookings/PC allocation in plenty of time.

The purpose of this exam is to provide assurance that all candidates achieving the qualification have gained sufficient knowledge and understanding from their programme of study and that they can independently recall and draw their knowledge and understanding together in an integrated way. Whilst this may not be new to you, it is essential that your learners are well prepared and that they have time to revise, reflect and prepare for these exams. We have produced a Teaching, Learning, and Assessment guide that is you should refer to alongside the present document ([Teaching, Learning and Assessment Guide](#)). If a learner does not pass the exam at their first attempt, there is only one opportunity to resit the exam, so preparation is essential.

Exam requirements of this qualification

This qualification has one pathway.

- **Architectural Joinery** – Theory exam (2 hours and 30 minutes).

The exam is graded and a candidate must achieve at least a Pass grade in order to be awarded the qualification. (In addition to the exam, a synoptic assignment must also be completed and passed). You can find full details of the synoptic assignment in the Qualification Handbook and the Synoptic Assessment Guide -please see the link to the qualification page at the end of this document).

When does the exam take place?

This qualification involves a one year programme of study. The exam is offered on two fixed dates in March or June. The exact dates will be published at the start of the academic year in the *Assessments and Exam Timetable* <http://www.cityandguilds.com/delivering-our-qualifications/exams-and-admin>.

In order to effectively plan teaching and exam preparation, centres should know when the exam will be taking place and allocate teaching time accordingly. Section 2 of this document gives a summary of the content that needs to be covered in order to prepare learners for the exam and full details of this are given in the Qualification Handbook.

Form of exam

The exam for this qualification can be taken either on paper or online.

Can candidates resit the exam?

Candidates who have failed an exam or wish to retake it in an attempt to improve their grade, can do so **twice**. The third and final retake opportunity applies to Level 3 only. The best result will count towards the final qualification. If the candidate fails the exam three times then they will fail the qualification.

How the exam is structured

Each exam has a total of 70 marks available.

Each exam is made up of:

- 10 multiple choice questions
- approximately 10 -12 short answer questions
- 1 extended response question.

Multiple choice and short answer questions are used to confirm **breadth of knowledge and understanding**.

The extended response question is to allow candidates to demonstrate **higher level and integrated understanding** through written discussion, analysis and evaluation. This question also ensures the exam can differentiate between those learners who are 'just able' and those who are higher achieving.

More details about and examples of question types are given in Section 3 of this document.

Assessment Objectives

The exams are based on the following set of assessment objectives (AOs). These are designed to allow the candidate's responses to be assessed across the following three categories of performance:

- **Recollection** of knowledge.
- **Understanding** of concepts, theories and processes.
- **Integrated application** of knowledge and understanding.

In full, the assessment objectives covered by the exam for this qualification are:

| Assessment objective | Mark allocation (approx %) |
|--|----------------------------|
| <i>The candidate..</i> | |
| AO1 Recalls knowledge from across the breadth of the qualification | 43% |
| AO2 2 Demonstrates understanding of concepts, theories and processes from a range of learning outcomes. | 40% |
| AO4 Applies knowledge, understanding and skills from across the breadth of the qualification in an integrated and holistic way to achieve specified purposes. | 17% |

Booking and taking the exam

All assessments for City & Guilds Technical Exams must be booked through Walled Garden. There is a deadline for booking exams, synoptic assessments and any other centre marked assessments, please refer to the time line to check these dates.

The exam must be taken under the supervision of an invigilator who is responsible for ensuring that it is conducted under controlled conditions. Full details of the conditions under which the exam must be taken can be found in the Joint Council for Qualifications (JCQ) document, [Instructions for Conducting Examinations \(ICE\)](#).

Special consideration

Candidates who are unable to sit the exam owing to temporary injury, illness or other indisposition at the scheduled time may qualify for special consideration. This is a post-examination adjustment that can, in certain circumstances, be made to a candidate's final grade. The Joint Council for Qualifications' guide to the special consideration process can be found at www.jcq.org.uk.

To make a request for special consideration, please contact: policy@cityandguilds.com

Access arrangements

Access arrangements are arrangements that allow candidates with particular requirements, disabilities or temporary illness to take assessments, where appropriate, using their normal way of working. The Joint Council for Qualifications document, *Access Arrangements and Reasonable Adjustments* gives full details and can be downloaded [here](#).

For further information and to apply for access arrangements please see:

[Access arrangements - When and how applications need to be made to City & Guilds](#)
[Applying for access arrangements on the Walled Garden](#)

2. Content assessed by the exam

Architectural Joinery

The exam assesses:

- **Unit 301: Principles of organising, planning and pricing construction work**
- **Unit 306: Set up and use fixed and transportable machinery**

Each exam assesses a sample of the content of these units. This means that a single exam will **not** cover 100% of the unit content. The full range of content will be assessed over a number of examination series. Details of the coverage of a particular exam paper will **not** be released in advance of the exam itself. Centres should **not** make assumptions about what will be assessed by a particular exam based on what has been covered on previous occasions. In order to be fully prepared for the exam, learners **must** be ready to answer questions on **any** of the content outlined below.

The table below provides an overview of how the qualification's Learning Outcomes are covered by each exam and the number of **marks** available per Learning Outcome (ie **not** the number of *questions* per Learning Outcome). In preparing candidates for the exam, we recommend that centres take note of the number of marks allocated to Learning Outcomes and to assign teaching and preparation time accordingly.

In preparing candidates for the exam, centres should refer to the Qualification Handbook which gives full details of each Learning Outcome.

The following is a summary of only that qualification content which is assessed by the exam and **not** a summary of the full content of the qualification.

| Unit | Learning outcome | Topics | MC Quest | Number of marks |
|---|---|---|----------|-----------------|
| 301 Principles of organising, planning and pricing construction work. | L01 Understand the way the construction industry is regulated | 1.1 Health and Safety regulations 1.2 Planning permission and building control | 4 | 21 |
| | L02 Understand energy efficiency and sustainable materials for construction | 2.1 Sustainable development 2.2 Thermally insulated materials 2.3 Construction methods for insulation 2.4 Energy saving measures | | |

| | | | | | |
|--|--|--------------------------|--|---|----|
| | LO3 Understand how to estimate quantities and price work for construction | 3.1 3.2 3.3 | Tendering process Estimate quantities of building materials Prepare a quote | | |
| | LO4 Understand how to plan work activities for construction | 4.1 4.2 | Planning construction works Risk assessments and method statements | | |
| | LO5 Understand how to communicate effectively in the workplace. | 5.1 | Written and oral communication | | |
| | LO6 Understand and use drawings and associated software | 6.1 6.2 6.3 | Manual drafting Computer Aided Design (CAD) Building Information Modelling (BIM) | | |
| 306 Set up and use fixed and transportable machinery | LO1 Understand and use legislation and documentation relating to the safe use of woodworking machinery | 1.1 1.2 1.3 1.4 | Legislation Manufacturer's literature and maintenance schedules Supervision and training records Risk assessments | 2 | 27 |
| | LO2 Understand and carry out the inspection and maintenance of fixed and transportable machinery | 2.1 2.2 | Inspection, fault diagnosis and maintenance Change tooling | | |
| | LO3 Use sawing machines | 3.1 3.2 3.3 | Saw materials to size and shape Use safety aids, features and extraction Use workpiece support | | |

| | | | | |
|------------------------------|-----|--------------------------------|----|-----------------|
| LO4 Use planing machines | 4.1 | Plane timber to size and shape | | |
| | 4.2 | Use safety aids and features | | |
| | 4.3 | Use workpiece support | | |
| LO5 Use a morticing machine | 5.1 | Cut mortices | | |
| | 5.2 | Use workpiece support | | |
| Total marks for sections: | | | 10 | 48 marks |
| Integration across units*: | | | | 12 marks |
| Total marks for exam: | | | | 70 Marks |

* *Integration across units.* These marks relate to Assessment Objective 4). These marks are awarded to differentiate between levels of performance by candidates taking the exam. The marks are given for how well a candidate has applied their knowledge, understanding and skills from across the units that make up the qualification in an integrated way to meet the requirements of the exam questions.

3. Guidance

Vocabulary of the exam: use of 'command' verbs

The exam questions are written using 'command' verbs. These are used to communicate to the candidate the type of answer required. Candidates should be familiarised with these as part of their exam preparation.

The following guidance has been produced on the main command verbs used in City & Guilds Technicals exams.

A more detailed version of this table, which also includes the command verbs used in the assignments is published in *City & Guilds Technical Qualifications Teaching, Learning and Assessment* guide.

| Command verb | Explanation and guidance |
|--|---|
| Analyse | Study or examine a complex issue, subject, event, etc in detail to explain and interpret, elements, causes, characteristics etc |
| Calculate | Work out the answer to a problem using mathematical operations |
| Compare (... and contrast) (or describe the similarities/differences) | Consider and describe the similarities (and differences) between two or more features, systems, ideas, etc |
| Define | Give the meaning of, technical vocabulary, terms, etc. |
| Describe | Give a detailed written account of a system, feature, etc (..the effect of...on...) the impact, change that has resulted from a cause, event, etc (..the process..) give the steps, stages, etc |
| Differentiate between | Establish and relate the characteristic differences between two or more things, concepts, etc |
| Discuss | Talk/write about a topic in detail, considering the different issues, ideas, opinions related to it |
| Distinguish between | Recognise and describe the characteristic differences between two things, or make one thing seem different from another |
| Evaluate | Analyse and describe the success, quality, benefits, value, etc (of an end product, outcome, etc) |
| Explain | Make (a situation, idea, process, etc) clear or easier to understand by giving details, (..how..) Give the stages or steps, etc in a process, including relationships, connections, etc between these and causes and effects. |
| Give example(s) illustrate/ | Use examples or images to support, clarify or demonstrate, an explanation, argument, theory, etc |

| | |
|-------------------------|--|
| Give a rationale | Provide a reason/reasons/basis for actions, decisions, beliefs, etc |
| Identify | Recognise a feature, usually from a document, image, etc and state what it is |
| Justify | Give reasons for, make a case for, account for, etc decisions, actions, conclusions, etc, in order to demonstrate why they suitable for or correct or meet the particular circumstances, context |
| Label | Add names or descriptions, indicating their positions, on an image, drawing, diagram, etc |
| List | Give as many answers, examples, etc as the question indicates (candidates are not required to write in full sentences) |
| Name | Give the (technical) name of something |
| Propose | Present a plan, strategy, etc (for consideration, discussion, acceptance, action, etc). |
| Select | choose the best, most suitable, etc, by making careful decisions |
| State | Give the answer, clearly and definitely |
| Summarise | Give a brief statement of the main points (of something) |

Question types

The following explains, and gives examples of, types of questions used in City & Guilds Technical exams. In preparing candidates to take the exam, it is recommended that you familiarise them with the requirements of each question type so that they can be effective and make best use of the time available when sitting the exam.

- An effective candidate will gauge the type and length of response required from the question and the number of marks available (which is given for each question on the exam paper).
- Short answer questions may not require candidates to write in complete sentences. Extended response questions will require a more developed response.
- Candidates should read the exam paper before attempting to answer the questions and should allocate time proportionate to the number of marks available for each question or section.

| Question type: | Example question: | Example Mark Scheme |
|--|---|---|
| <p>Multiple Choice questions These are objective questions with a predetermined answer. These consist of a question (or stem) and four options. The candidate should select the correct option (the key). The other 3 options (the distractors) will be plausible but incorrect in some significant respect so that the candidate is required to consider and reject these in order to identify the correct option.</p> | <p>Where is multi-foil insulation most commonly placed in a building?</p> <p>a. Under joists. b. Between joists. c. Between rafters. d. Behind dry lining.</p> | <p>Correct answer: D</p> |
| <p>Short answer questions (restricted response) These are questions which require candidates to give a brief and concise written response. The number of marks available will correspond to the number of pieces of information/examples and the length of response required by the question.</p> | <p>Compare polyisocyanurate (PIR) with fibreglass when used for insulation purposes. (5 marks)</p> | <p>Answer Answer could include any of the following for five marks, with relevant comparison of the two materials</p> <p>PIR is a better insulator than fibreglass</p> |

PIR saves space as it thinner thicknesses can be used to achieve the same values as fibreglass
PIR is not itchy in use
PIR is less absorbent
PIR is rigid

Structured Response Questions

These are questions that have more than one part (eg a), b), etc.). The overall question is made up of linked, short answer questions which move the candidate through the topic in a structured way. For example, the question will usually start with a 'recall'/'state'/'describe' question followed by an 'explain' to draw out understanding of the topic. They usually have a shared introductory 'stem', and the number of marks may increase through the question.

- a) Name **two** sources of information that provides advice and guidance on safe working practices when using woodworking machinery. (2 marks)
- b) Explain how to ensure a workshop is COSHH compliant. (3 marks)

Answers

- a) Answer could include any **two** of the following for **two** marks, **one** mark for each
- HSE
 - ACOP
 - BWF
 - Manufacturers instructions
 - PUWER
- b) Explanation could include any of the following for **three** marks, **one** mark for each with justification of how these ensures a workshop is COSHH compliant.
- Ventilation
 - Storage of flammable materials
 - Materials data sheets
 - Risk assessments
 - Toolbox talks
 - Hazards signage
 - LEV used appropriately

Extended response questions

Extended response questions are those that require the candidate to write a longer written response using sentences and paragraphs. These usually require candidates to discuss, explain, etc. a topic in some detail. The question is often based on a short case study, scenario or other prompt. The level of detail should be gauged from the question and the number of marks available.

Example question

A “one-off” Sapele traditional box frame window has been ordered. Only the approximate size has been obtained for pricing purposes. An operative has been asked to produce the window to match the existing. The timber has been ordered in and delivered.

Discuss the planning and machining requirements to manufacture the window.

(12 marks)

Indicative content

Pre-checks

- Carry out site survey
- Check sizes and design

Setting out/planning

- Produce drawing
- Set out full size (rod)
- Produce cutting list
- Produce sundries list

Material conversion

- Mark out plank before cutting to minimise waste
- Carry out checks on machines before using
- Rip and crosscut planks to sawn sizes
- Face and edge timber
- Plane to size

Marking out

- Mark out all parts

Secondary machining

- Machine frame and cill parts
- Joint components
- Profile components

Band 1 (1 – 4 marks)

Response shows limited understanding of the brief and the task. Listed some of the stages in the process without much detail, lack clarity and structure. The stages in the process listed in no particular order and showed little or no knowledge of component terminology. To access higher marks, response showed some attempt at structuring their discussion in a logical order.

Example band 1 response

Order in the timber needed, machine to size, mark out joints, cut and assemble all parts of box then make sashes to fit.

Band 2 (5 – 8 marks)

Response shows good understanding of the brief and the task. Listed most of the stages in the process with some detail and clarity. Discussion was clear and well structured. Use of component terminology was clear and relevant to the brief. To access higher marks, the stages within the process is in a clear sequence.

Example band 2 response

1.

You need to know the exact size of the window before you can start the job so you don't have any problems later on with it. When you have the size then you can start running the timber off for the box frame to the sizes of the old one. Once the timber is ran off you can start marking and setting out the window. You need to make sure that the window is the correct size when you have housed all the joints out so they fit together and the right size when you need to put the exact pulley weights. You can glue the frame up and get measurements for the sashes you could knock 6mm off the width for draught strips you can then run the timber for the sash and then you can rebate and moulding on the sash before marking and setting out. Then you can glue the window up and can start to sand the box and the sashes off but don't fill them yet, you will need to put draught seals around both

sashes but not on the middle rail, and also put cord grooves down the side but stopping it around 75mm -100mm from the top so it doesn't show. You can fill and sand the window down and preserve them, wait for it to go off then paint them.

2.

Get the paper work that the window has to be made from make a cutting list of the window putting in all the sizes like the width, depth and lengths check though it, now you know what size timber you need start machining get the timber and check if you have enough look through the timber to see which is the most economical way of getting the most out of your timber to save wastage. Start cutting and machining your timber once all the timber is cut to the right length and is all square round it is time to mark out the timber so you know where all the grooves and moulds go start to mould your timber in separate bits so when it is all machined it will go together well once its ready to go together it is better to sand all the insides of the window so if this is already done before it goes together because it is harder to sand a box when it is together. You can't put all the pieces of a window together straight away because it has moving parts so you have to get them all moving first before you finish it off.

Band 3 (9 – 12 marks)

Response shows extensive understanding of the brief and the task. Response listed all of the stages in the process with comprehensive detail. Response was in a logical order, including the stages in the process. Use of component terminology was good and relevant to the brief. In order to access higher marks, the response will include strong attention to detail through a cohesive and thorough discussion.

Example band 3 response

As you only have an approximate size a site visit would be required to confirm exact sizes and positions of glazing bars etc. to match existing. Note should be taken of any specialist mouldings so cutters can be fabricated if required. This will incur a lead-time and the client/ architect needs to be informed of any possible delays in planned delivery times.

Once all final details have been clarified and agreed, a setting out rod and cutting list needs to be produced to include ironmongery etc.

Order pulleys locks etc. from material lists

From this the most economical method of converting timber to produce the components can be worked out.

Mark out plank before cutting to minimise waste

Carry out checks on machines before using

Rip and crosscut planks to sawn sizes

Face and edge timber

Plane to size

Mark out all components from rod
Machine frame and cill parts
Joint components
Profile components
Assemble components in recommend sequence
Finish window and sashes as per clients specification quality check and pack ensuring

Examination technique

Candidates with a good understanding of the subject being assessed can often lose marks in exams because they lack experience or confidence in exams or awareness of how to maximise the time available to get the most out of the exam. Here is some suggested guidance for areas that could be covered in advance to help learners improve exam performance.

Before the exam

Although candidates cannot plan the answers they will give in advance, exams for Technical qualifications do follow a common structure and format. In advance of taking the exam, candidates should:

- be familiar with the structure of the exam (ie number and type of questions).
- be aware of the amount of time they have in total to complete the exam.
- have a plan, based on the exam start and finish time for how long to spend on each question/section of the exam.
- be aware of how many marks are available for each question, how much they should expect to write for each question and allow most time for those questions which have the most marks available.

At the start of the exam session

At the start of the exam, candidates:

- should carefully read through the exam paper before answering any questions.
- may find it helpful, where possible, to mark or highlight key information such as command words and number of marks available on the question paper.
- identify questions which require an extended written answer and those questions where all or part of the question may be answered by giving bullets, lists etc rather than full sentences.

Answering the questions

Candidates do not have to answer exam questions in any particular order. They may find it helpful to consider, for example:

- tackling first those questions which they find easiest. This should help them get into the 'flow' of the exam and help confidence by building up marks quickly and at the start of the exam.
- tackling the extended answer question at an early stage of the exam to make sure they spend sufficient time on it and do not run out of time at the end of the exam.

Candidates should avoid wasting time by repeating the question either in full or in part in their answer.

Candidates should **always** attempt every question, even questions where they may be less confident about the answer they are giving. Candidates should be discouraged however, from spending too long on any answer they are less sure about and providing answers that are longer and give more detail than should be necessary in the hope of picking up marks. This may mean they have less time to answer questions that they are better prepared to answer.

Extended answer questions

Before writing out in full their answer to extended questions, candidates may find it helpful to identify the key requirements of the question and jot down a brief plan or outline of how they will answer it. This will help clarify their thinking and make sure that they don't get 'bogged down' or provide too much detail for one part of the question at the expense of others.

Towards the end of the exam

Candidates should always set aside time at the end of the exam to read back through and review what they have written in order to make sure this is legible, makes sense and answers the question in full.

If a candidate finds they are running out of time to finish an answer towards the end of the exam, they should attempt to complete the answer in abbreviated or note form. Provided the content is clear and relevant, examiners will consider such answers and award marks where merited.

Further guidance on preparing candidates to take the exam is given in the City & Guilds publication, [Technical Qualifications, Teaching, Learning and Assessment](#) which can be downloaded free of charge from City & Guilds website.

4. Further information

For further information to support delivery and exam preparation for this qualification, centres should see:

City & Guilds

Qualification homepage: <http://www.cityandguilds.com/qualifications-and-apprenticeships/construction/construction/7906-carpentry-joinery> which includes:

- *Qualification handbook*
- *Synoptic assignment*
- *Sample assessments*

Technical Qualifications, Resources and Support: cityandguilds.com/techbac/technical-qualifications/resources-and-support

Joint Council for Qualifications

Instructions for Conducting Examinations: www.jcq.org.uk/exams-office/ice---instructions-for-conducting-examinations