



Engineering Construction Industry Training Board

Qualification Information Booklet
Level 3 Diploma
in Estimating Practice

CONTENTS

INTRODUCTION	3
1. WHAT IS AN ECITB QCF QUALIFICATION?	4
1.1 <i>What is the process involved in achieving a QCF qualification?.....</i>	5
1.2 <i>What will be assessed?.....</i>	8
1.3 <i>How will assessment take place?.....</i>	8
1.4 <i>Simulation requirements.....</i>	8
1.5 <i>Assessment of candidates with particular assessment requirements.....</i>	9
1.6 <i>Recommended prior learning.....</i>	12
1.7 <i>Credit.....</i>	12
1.8 <i>Rules of Combination.....</i>	12
1.9 <i>Career development within the engineering construction industry.....</i>	12
2. QUALIFICATION STRUCTURE	13
2.1 <i>Level 3 Diploma in Estimating Practice.....</i>	13
2.2 <i>Unit summaries.....</i>	15
3. LEVEL 3 DIPLOMA IN ESTIMATING PRACTICE.....	18
<i>PC - UA 92: Apply information technology (IT) to estimating.....</i>	18
<i>PC - UA 4: Monitor risks, opportunities and uncertainties and review contingencies in the area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.....</i>	20
<i>PC - UA 93: Apply the quality management system in relation to estimating.....</i>	22
<i>PC - UA 94: Retrieve, record and present estimating related information.....</i>	24
<i>PC - UA 14: Develop personal competencies in the professional work role in Project Control, Estimating, Planning, Cost Engineering or Commercial Support.....</i>	26
<i>PC - UA 17: Contribute to effective Project Control, Estimating, Planning, Cost Engineering or Commercial Support relationships.....</i>	28
<i>PC - UA 18: Observe and apply professional Project Control, Estimating, Planning, Cost Engineering or Commercial Support ethics and values.....</i>	30
<i>PC - UA 95: Identify and quantify emerging changes through estimating activities.....</i>	32
<i>PC - UA 24: Prepare cost estimates through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities.....</i>	34
<i>PC - UA 33: Prepare budgets for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities.....</i>	36
<i>PC - UA 53: Generate and use statistical data for Project Control, Estimating, Planning, Cost Engineering or Commercial Support.....</i>	38
<i>PC - UA 55: Apply learning curve models to recurring tasks for Project Control, Estimating, Planning, Cost Engineering or Commercial Support.....</i>	40
<i>PC -UA 61: Contribute to the use of financial controls and techniques for Project Control, Estimating, Planning, Cost Engineering or Commercial Support.....</i>	43
<i>PC - UA 75: Contribute to commercial activities through project control, cost engineering, estimating or planning activities.....</i>	45
<i>PC - UA 78: Carry out cost control activities through project control, cost engineering, estimating or planning.....</i>	48
<i>PC - UA 34: Prepare schedules for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities.....</i>	50
<i>PC - UA 57: Contribute to cost or time savings through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities during concept and definition phases.....</i>	52
<i>PC - UA 59: Promote and progress production or construction efficiency through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities.....</i>	54
<i>PC - UA 76: Input to the construction or manufacturing execution plan.....</i>	57

Introduction

This booklet has been developed to provide anyone considering the ECITB Level 3 Diploma in Estimating Practice with an introduction to the awards currently available through ECITB. This booklet contains a copy of the QCF units within the Estimating qualification as well as a summary of the way in which QCF qualifications are constructed; what the process is in achieving an ECITB qualification and how it is assessed.

Should you have any queries or require any further information regarding the awards offered by ECITB please contact the Awards & Qualification Administrator at:

HEAD OFFICE ADDRESS	CONTACT DETAILS
ECITB Blue Court Church Lane Kings Langley Hertfordshire WD4 8JP	Tel: 01923 260000 e-mail: nsvq@ecitb.org.uk website: www.ecitb.org.uk

1. What is an ECITB QCF qualification?

ECITB Qualification Credit Framework qualifications (QCF) are vocational qualifications which are based on the National Occupational Standards (NOS) of that particular sector of industry. NOS are developed by employers and professional bodies in conjunction with the Standard Setting Body and describe what is meant by occupational competence within a particular job role.

All QCF qualifications are structured in such a way that they can be broken down into the following common parts:

- Units;
- Level;
- Credit value;
- Learner outcomes;
- Assessment criteria;
- Assessment requirements.

Each of these parts is further described below:

Units	A qualification is divided into units, each of which describes an activity which the candidate will be expected to perform competently.
Level	The level represents the complexity, autonomy and/or range of achievement expressed within the unit.
Credit value	The credit value represents the learning time being defined as the time taken by learners at the level of the unit, on average, to complete the learning outcomes of the unit to the standard determined by the assessment criteria.
Learner outcomes	Learner outcomes set out what a candidate is expected to know, understand or be able to do as the result of a process of learning.
Assessment Criteria	The assessment criteria within a unit specifies the standard a candidate is expected to meet to demonstrate that the learning outcomes have been achieved.
Assessment requirements	Details any requirements about the way a unit must be assessed.

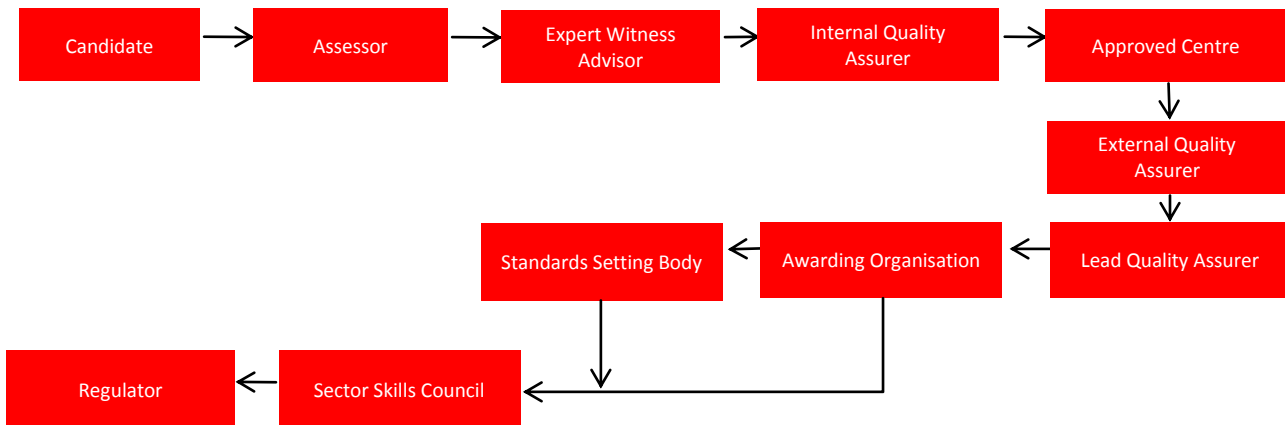
1.1 What is the process involved in achieving a QCF qualification?

Once a candidate has been registered with the awarding organisation, in this case ECITB Awards and Qualifications, they will be ready to begin working towards their qualification. They will then be introduced to the assessor who will offer support and guidance as the candidate progresses through the stages of the qualification. The assessor will firstly introduce the candidate to the other key members of the qualification system. These will include:

- Internal Quality Assurer
- Expert Witness Advisor
- Approved Centre
- Centre Co-ordinator
- External Quality Assurer
- Lead Quality Assurer
- Awarding Organisation
- Standard Setting Body
- Regulator (Office of Qualifications and Examinations Regulation (Ofqual)).

The Assessor will also explain what roles each of these key members will play in assuring the quality of the qualifications system. This is vitally important as it helps to ensure that the assessment of qualifications is valid and reliable and that certificates are only awarded to those candidates who do successfully meet the standards required.

The diagram below illustrates the flow of information between each of the key members.



LEVEL 3 DIPLOMA IN ESTIMATING PRACTICE

The following tables summarise the roles which each of the key members perform in quality assuring the regulated qualifications systems, including N/SVQs.

Who's who	What is their role?
<p>Candidates Individuals seeking validation for their achievements and competence.</p>	<ul style="list-style-type: none"> • Show they can perform to the national standards in order to be awarded credit, counting towards a Qualification and demonstrate the specified knowledge, understanding and skills. • Take some responsibility for the quality of evidence provided to assessors.
<p>Assessors Nominated by an approved centre and approved by an awarding organisation to assess a candidate's evidence. In direct contact with candidates. Holds appropriate qualifications as agreed by the regulators such as D32 and D33 or A1.</p>	<ul style="list-style-type: none"> • Judge candidates' evidence against the national standards. • Advise candidates on opportunities to collect evidence. • Ensure that the evidence provided is current. (Up to and including the two year period prior to the portfolio completion date for any unit or qualification) • Decide whether the candidate has demonstrated competence, give feedback on the decision and record it. • Ensure that their assessment practice meets awarding organisation guidance and national standards.
<p>Expert Witness Advisor Nominated by an approved centre and approved by an awarding organisation to carry out direct observation as the exception when an assessor is not available.</p>	<ul style="list-style-type: none"> • Can carry out direct observation of the candidate against the criteria for the mandatory assessor observation of assessment criteria and assessment requirements where the practicalities and costs of having an assessor available to observe the candidate at work prohibitive or impracticable. • The EWA shall meet the criteria for assessor occupational expertise as specified by the ECITB Standards Setting Body Assessment Strategy. • A registered EWA can provide mandatory direct observation of any candidate in the relevant qualification for any approved centre as long as the assessor/EWA procedures are followed.
<p>Internal Quality Assurers Nominated by an approved centre and approved by an awarding organisation to ensure consistency and quality of assessment. Holds V1 and A1 or appropriate qualifications as agreed by the regulators. Works to the ECITB IQA Code of Practice</p>	<ul style="list-style-type: none"> • Work with assessors to ensure the quality and consistency of assessment. • Sample candidate assessments to ensure consistent assessment. • Ensure their own internal quality assurance meets current standards. • Ensure that assessment and verification records and documents are fit for purpose and meet awarding organisation requirements. • Ensure that requests for certificates to the awarding organisation are based on assessments of consistent quality. • Provide support and guidance for the centre's assessors.
<p>Approved Centre Co-ordinators Point of contact for awarding bodies. May take on some Internal Quality Assurer functions, particularly relating to administration.</p>	<ul style="list-style-type: none"> • Act as a contact for the awarding organisation and the External Quality Assurer. • Ensure that there are accurate assessment and verification records for the qualification. • Request certificates and credits from the awarding organisation.
<p>Approved Centres Organisations approved by awarding bodies to assess and verify qualifications.</p>	<ul style="list-style-type: none"> • Comply with regulatory requirements. • Manage assessment and verification on a day-to-day basis. • Have effective assessment practices and internal verification procedures. • Meet awarding organisation requirements for qualification delivery. • Have sufficient competent Assessors and Internal Quality Assurers with enough time and authority to carry out their roles effectively.

<p>Lead Quality Assurer Appointed by the ECITB awarding organisation to manage teams of External Quality Assurers (EQA)</p>	<ul style="list-style-type: none"> • Manage the workload and monitor performance of the External Quality Assurers. • Provide advice and guidance to External Quality Assurers. • Carry out all new centre approvals. • Approve post approval monitoring reports and ensure all actions are implemented. • Approve any recommendations for sanctions on centres. • Resolve disputes. • Approve recommendations for appointment of new assessors and Internal Quality Assurers.
<p>External Quality Assurers Appointed by the ECITB awarding organisation to monitor the work of approved centres. Act as key link between the awarding organisation and approved centres. Hold V2 and A1 or appropriate qualification as agreed with the regulators. Work to the ECITB Code of Practice.</p>	<ul style="list-style-type: none"> • Make sure that decisions on competence are consistent across centres. • Make sure that the quality of assessment and verification meets national standards. • Sample candidate assessments and monitor assessment and verification practices in centres, including interviews with assessors and Internal Quality Assurers and candidates. • Provide advice, guidance and feedback to centres. • Make regular visits to centres and assessment locations. • Ensure that their own verification practice meets V2 and A1 or appropriate qualification as agreed with the regulators.
<p>Awarding Organisations An organisation approved by the regulators to award qualifications.</p>	<ul style="list-style-type: none"> • Ensure the quality and consistency of assessment for qualifications nationally. • Produce guidance for centres. • Appoint, support and develop External Quality Assurers, allocate them to centres and monitor their work. • Approve and monitor centres against the approved centre criteria. • Award credit. • Collect information from centres to inform national decisions about qualification delivery. • Provide information to the regulators.
<p>Standards Setting Bodies (SSB) Develop the national occupational standards on which qualifications are based.</p>	<ul style="list-style-type: none"> • Work with industry to develop National Occupational Standards. • Work with awarding bodies to produce assessment strategies. • Provide information about, and clarification of, the National Occupational Standards.
<p>Sector Skills Councils (SSC)</p>	<ul style="list-style-type: none"> • Accredit qualifications put forward by awarding organisations if they meet the published criteria.
<p>Ofqual Ofqual is the regulator of qualifications, test and examinations in England, Wales and Northern Ireland.</p>	<ul style="list-style-type: none"> • Ensure that organisations that offer and deliver qualifications (awarding organisations) have good systems in place, and that they are held to account for their performance. • Ensure that all qualifications offered by awarding organisations are fair and are comparable with other qualifications. • Ensure that standards in qualifications, exams and tests are monitored and the findings are reported. • Ensure that there is fair access to qualifications for all candidates. • Ensure the quality of marking of exams, tests and other assessments is high, so that learners get the results they deserve. • Ensure that the qualifications market provides value for money and meets the needs of learners and employers. • Ensure that debate about important topics, such as standards of exams and qualifications, is encouraged.

1.2 What will be assessed?

Once the candidate has decided with the assessor which route they will take through the qualification, i.e. the units they will work towards, they are ready to begin assessment. Broadly speaking two aspects of the candidate's working practice will be assessed: their performance; and their knowledge and understanding. The assessor will work with the candidate to plan how, when and where evidence will be gathered to cover these aspects.

1.3 How will assessment take place?

There are a variety of methods through which evidence of the candidate's competence and understanding can be gathered. There are also different methods by which to collect performance and knowledge evidence:

- Direct observation of the candidate's performance by the assessor and/or EWA.
- Testimony from a witness such as a candidate's colleague, this is also observation of the candidate.
- Documentary evidence (*such as permits to work, work specifications etc.*) which relate to work successfully completed by the candidate on a past occasion.
- Demonstration of a task by the candidate at the assessor's request. This is known as 'Simulation'.
- Questioning of the candidate to establish knowledge and understanding requirements.

These options give an assessor and the candidate some flexibility in how they are able to prove competence. However, some of these assessment methods are less reliable and as such their use may be limited within the qualification. If this is the case the guidance contained within the QCF units will provide further clarification. Direct observation of the candidate by the assessor is the most reliable, and often the most straightforward, method of gathering evidence. The approved centre and the assessment team responsible for assessing the candidate will determine whether observation or some of the other assessment methods listed above offer the best assessment solution for each individual candidate.

In relation to evidence of knowledge and understanding there are two main assessment methods:

1. Performance evidence gathered in the course of working towards the unit.
2. Questioning of the candidate.

In some instances, it will be self-evident from the candidate's performance that they have acquired the necessary knowledge and understanding e.g. where the unit requires knowledge of how to carry out a specific task and by carrying it out effectively the candidate demonstrates that they know what to do.

However, knowledge of why something is done in a certain way cannot be demonstrated through performance alone and questioning of the candidate is another assessment method that could be used.

1.4 Simulation requirements

Demonstration, as previously outlined, is one of the assessment methods available to candidates and assessors through which to observe a candidate's competence. However, its use has been limited to certain specific units in which it may be possible to gather the naturally occurring workplace evidence normally required.

Reference needs to be made to the standards to confirm the status of each unit; however, as a rule simulation is only permissible where one or more of the following characteristics apply:

- a) Health and safety could be compromised by seeking workplace evidence.
- b) The behaviour or situation under which assessment occurs happens infrequently in the workplace.
- c) The responsibility for the work rests with the candidate, but it is typically either delegated or carried out jointly with another and the candidate has limited opportunity to demonstrate it directly and individually.
- d) There would be unacceptable commercial or operational risk in securing workplace assessment.
- e) Facilities would need to be placed in an unacceptable operating state to allow for assessment to take place.

The assessment requirements detail within each unit whether or not simulation is permitted within the assessment for that unit.

Where simulation is permitted, the simulated activity must be designed to reflect the activity as it would be carried out in a typical workplace environment, including:

- a) The presence, actions and capabilities of other interacting personnel.
- b) The urgency with which the activity must be carried out and the time needed to complete it.
- c) The number and sequence of actions needed to complete the activity.
- d) The number and complexity of the factors affecting the activity.
- e) The skills and knowledge needed to carry out the activity.
- f) The nature and availability of resources needed to carry out the activity.
- g) Access to references and sources of advice and assistance that could be needed if problems arise.
- h) The type of documentation to be completed.
- i) The standards to which the activity must be carried out, including any practices and procedures which must be followed.
- j) The outcomes which the activity will produce.
- k) Access to normal/usual workplace instructions.

1.5 Assessment of candidates with particular assessment requirements

Equal Opportunities, Reasonable Adjustments and Special Considerations

Access to Fair Assessment

ECITB Awards & Qualifications requires approved centres to demonstrate a clear commitment to access to fair assessment, equal opportunities, reasonable adjustments and special considerations and to operate a Fair Assessment Policy in all matters concerning the assessment of candidates for the award of Qualifications and/or certificates or unit credits and in any appeals against approved centre decisions.

The policy must take account of full current legislation in the area of access to fair assessment and equal opportunities.

The approved centre must ensure that relevant staff in the assessment team receives training in the relevant sections of current legislation and that sufficient and appropriate information with regard to the content of this procedure is passed to all members of the approved centre assessment team.

The approved centre must maintain records of assessment and verification decisions, which demonstrate that:

- Assessment decisions only discriminate between candidates on the basis of the competence defined by the National Occupational Standards specified in the qualification.
- Assessment judgements are made regardless of race, gender, disability, nationality, religion, age, sexual orientation, family status or any other irrelevant factor.

Arrangements for candidates with particular assessment requirements

Principles

Approved centres must ensure that there are no unnecessary barriers to assessment, which prevent candidates from effectively demonstrating their attainment. Arrangements for candidates with particular assessment requirements (special arrangements) must also ensure that such candidates are not given, or do not appear to be given, an unfair advantage. Special arrangements are generally not appropriate where the candidate's particular difficulty directly affects performance in the actual attributes that are the focus of assessment.

Approved centres must make special arrangements according to the needs of the individual candidate, reflecting the candidate's usual method of working, the assessment requirements as set out in the specification and any guidelines set down by the regulatory authorities. Any special arrangements must ensure that the validity, reliability and integrity of the assessment are preserved and that certificates accurately reflect candidate attainment.

Approved centres are only required to do what is 'reasonable' in terms of giving access. What is reasonable will depend on the individual circumstances, cost implications and the practicality and effectiveness of the adjustment. As stated above the NOS must be taken into consideration, as must any safety and health implications.

There are two ways in which access to fair assessment can be maintained

1. Through reasonable adjustments.
2. Through special consideration.

Reasonable Adjustments

A reasonable adjustment is any action that helps to reduce the effect of a disability that places the candidate at a substantial disadvantage in the assessment situation.

Reasonable adjustments must not affect the integrity of what needs to be assessed, but may involve:

- Changing standard assessment arrangements, for example allowing candidates extra time to complete the assessment activity.
- Adapting assessment materials, such as providing materials in Braille.
- Providing access facilitators during assessment, such as a sign language interpreter or a reader.
- Re-organising the assessment room, such as removing visual stimuli for an autistic candidate.

Reasonable adjustments will not be taken into consideration during the assessment of the candidates work.

Special Consideration

Special consideration is given following an assessment to candidates who are present for the assessment but may have been disadvantaged by temporary illness, injury or adverse circumstances, which arose at or near the time of assessment.

Special consideration should not give the candidate an unfair advantage neither should its use cause the user of the certificate to be misled regarding a candidate's achievements. The candidate's result must reflect his or her achievement in the assessment and not necessarily his or her potential ability.

Where an assessment requires a competence, criteria or standard to be met fully, it may not be possible to apply special consideration. In some circumstances it may be more appropriate to offer the candidate an opportunity to retake the assessment at a later date or to extend the registration period so that the candidate has more time to complete the assessment activity.

Approved centres must make provision for special consideration to ensure that candidates who suffer temporary illness, injury or indisposition at the time of assessment are treated fairly. Such assessment should be made available to the candidate as soon as is reasonably practical within the guidelines of access to fair assessment. Where this is not possible, the awarding organisation will consider each individual case for special consideration, identifying the minimum requirements for an award to be made.

Procedures

Approved centre assessment team members should refer to the written procedures provided within the ECITB Awards & Qualifications Quality Assurance Procedures Manual for further guidance and information or to their own Approved Centre Operations Manual.

Monitoring and Reporting

The awarding organisation will monitor, evaluate and report annually on the use of special arrangements by its approved centres. Relevant data will be shared with the regulatory authorities on request.

1.6 Recommended prior learning

There is no prior knowledge, attainment or experience required for this qualification. Existing workers are expected to be competent by virtue of their length of service and experience and satisfactory performance in their roles, and will need to achieve the qualification in order to have this competence validated.

1.7 Credit

Credit is awarded to candidates for the successful achievement of the learning outcomes of a unit. The number of credits awarded will be the same as the value of the achieved unit. It is not possible for some credit to be achieved for partial completion of a unit or for candidates be awarded credit when all learning outcomes are not achieved by virtue of any 'compensation' for stronger performance in other areas of learning/achievement.

Credit accumulation is the term used to describe the process of putting a combination of credits to meet the achievement requirements of a qualification. The rules of combination for a qualification determine the requirements for achievement of credits through particular units. Awarding Organisations award qualifications based on this process.

Credit transfer describes the process of using a credit or credits awarded in the context of a different qualification or awarded by a different awarding organisation towards the achievement requirements of another qualification. Credits can only be transferred between qualifications and awarding organisations subject to the rules of combination for the receiving qualification.

1.8 Rules of Combination

Rules of combination specify the credits that need to be achieved through completion of particular units for a qualification to be awarded. All accredited qualifications within the QCF must have a set of rules of combination. Rules of combination set out the credit value of the qualification, credits from mandatory units and credits from optional units, credits from equivalent units and exemptions along with time limits on the process of credit accumulation or exemptions.

Exemptions are detailed within the rules of combination, exemptions set out any exemption from the requirement to achieve credit for units that candidates can claim, based on certificated achievement outside the QCF deemed to be of equivalent value to a QCF unit or units.

Time limits on the process of credit accumulation or exemptions are set out for each QCF unit within the rules of combination. ECITB QCF units have a time limit of 24 months from achievement for use within a QCF qualification.

1.9 Career development within the engineering construction industry

The ECITB's Apprenticeship programme is its main vehicle for recruiting and training young people to meet the future skills requirements of the industry. Qualifications at Levels 2 and 3 are often an integral part of this scheme.

The ECITB provides an alternative training route towards qualifications for those who have not completed an apprenticeship but seek to have their competence validated. Information on this scheme is available on request from ECITB offices.

For more information about career progression you can go to the ECITB website.

2. Qualification Structure

2.1 Level 3 Diploma in Estimating Practice

To achieve this qualification, candidates must attain a minimum of 58 credits made up of:

- all NINE of the Mandatory Units (47 credits)
- plus
- a minimum THREE unit from the Optional Units (minimum 11 credits)

MANDATORY UNITS – candidates must achieve all NINE units to a total of 47 credits

Ref. Number	Unit Title	Level	Credit
PC - UA 92	Apply information technology (IT) to estimating	3	10
PC - UA 4	Monitor risks, opportunities and uncertainties and review contingencies in the area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support	4	5
PC - UA 93	Apply the quality management system in relation to estimating	3	7
PC - UA 94	Retrieve, record and present estimating related information	3	5
PC - UA 14	Develop personal competencies in the professional work role in Project Control, Estimating, Planning, Cost Engineering or Commercial Support	3	2
PC - UA 17	Contribute to effective Project Control, Estimating, Planning, Cost Engineering or Commercial Support relationships	3	3
PC - UA 18	Observe and apply professional Project Control, Estimating, Planning, Cost Engineering or Commercial Support ethics and values	3	2
PC - UA 95	Identify and quantify emerging changes through estimating activities	4	7
PC - UA 24	Prepare cost estimates through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities	3	6

LEVEL 3 DIPLOMA IN ESTIMATING PRACTICE

OPTIONAL UNITS – candidates must achieve a minimum of THREE units to attain at least 11 credits

ONE unit from the following group:

PC-UA 34, PC-UA 57, PC-UA 59, PC-UA 76

A further TWO units to be taken from the following group.

PC-UA 33, PC-UA 53, PC-UA 55, PC-UA 61, PC-UA 75, PC-UA 78

Ref. Number	Unit Title	Level	Credit
PC - UA 33	Prepare budgets for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities	3	4
PC - UA 53	Generate and use statistical data for Project Control, Estimating, Planning, Cost Engineering or Commercial Support	4	4
PC - UA 55	Apply learning curve models to recurring tasks for Project Control, Estimating, Planning, Cost Engineering or Commercial Support	3	5
PC - UA 61	Contribute to the use of financial controls and techniques for Project Control, Estimating, Planning, Cost Engineering or Commercial Support	3	3
PC - UA 75	Contribute to commercial activities through project control, cost engineering, estimating or planning activities	4	8
PC - UA 78	Carry out cost control activities through project control, cost engineering, estimating or planning	4	9
PC - UA 34	Prepare schedules for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities	3	4
PC - UA 57	Contribute to cost or time savings through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities during concept and definition phases	3	8
PC - UA 59	Promote and progress production or construction efficiency through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities	3	8
PC - UA 76	Input to the construction or manufacturing execution plan	3	5

2.2 Unit summaries

Mandatory Units

PC - UA 92: Apply information technology (IT) to cost engineering

This unit enables the assessment of the learner's competence in applying IT in the execution of the estimating function. It is expected that the competence will include the use of proprietary, specialist or bespoke software and IT systems to meet specific functional needs.

PC - UA 4: Monitor risks, opportunities and uncertainties and review contingencies in the area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support

This unit enables the assessment of the learner's competence to monitor risks, opportunities and uncertainties and to review contingencies in the area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support. The context is the commercial impact on a project of the potential risks, opportunities and uncertainties to schedule cost, performance or specification.

PC - UA 93: Apply the quality management system in relation to estimating

This unit enables the assessment of the learner's competence to apply; estimating procedures; agreed quality procedures; methods and; systems within their company. It also enables the assessment of the learner's competence to support a culture of quality and the associated practices.

PC - UA 94: Retrieve, record and present estimating related information

This unit enables the assessment of the learner's competence in the retrieval, recording and presenting of estimating related information and checking the received information and output data is of the required quality, and is protected.

PC - UA 14: Develop personal competencies in the professional work role in Project Control, Estimating, Planning, Cost Engineering or Commercial Support

This unit enables assessment of the learner's competence to manage their own personal and professional development within Project Control, Estimating, Planning, Cost Engineering or Commercial Support on a continuous basis.

PC - UA 17: Contribute to effective Project Control, Estimating, Planning, Cost Engineering or Commercial Support relationships

This unit enables the assessment of the learner's competence in developing and maintaining Project Control, Estimating, Planning, Cost Engineering or Commercial Support relationships to assist in delivery of assigned responsibilities to the benefit of the project, function or organisation overall.

“Colleagues” are any person the learner must have a working relationship with regardless of status, position, organisation or function they belong to.

PC - UA 18: Observe and apply professional Project Control, Estimating, Planning, Cost Engineering or Commercial Support ethics and values

This unit enables assessment of the learner's competence to observe and apply integrity and professional ethics and values in the execution of their Project Control, Estimating, Planning, Cost Engineering or Commercial Support responsibilities.

PC -UA 95: Identify and quantify emerging changes through estimating activities

This unit enables the assessment of the learner's competence to identify and quantify emerging changes through estimating activities whether caused by internal or external difficulties or opportunities.

PC - UA 24: Prepare cost estimates through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities

This unit enables assessment of the learner's competence to prepare cost estimates for defined scopes of work at any stage through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities. This includes the need to predict, specify and determine resources for the component activities and estimate total costs for any project stage. The resources and estimate total costs for the component activities of continuing activities, such as operations and maintenance for a given period, typically a year, 5 years etc.

A project or proposal may be limited in its scope to a phase of the life cycle such as acquisition or in-service support.

Optional Units

PC - UA 33: Prepare budgets for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities

This unit enables the assessment of the learner's competence to prepare the budgets through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities from established estimates of resources, to meet defined project requirements.

This will include for the competence to assist in the evaluation of budgetary requirements and implications within a schedule.

PC - UA 53: Generate and use statistical data for Project Control, Estimating, Planning, Cost Engineering or Commercial Support

This unit enables the assessment of the learner's competence to collect, compile and use any observed or reported data in relation to Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities and outputs.

The practitioners are expected to make judgements using recognised statistical procedures.

PC - UA 55: Apply learning curve models to recurring tasks for Project Control, Estimating, Planning, Cost Engineering or Commercial Support

This unit enables the assessment of the learner's competence to apply learning curve theory as a predictive technique for future costs or schedule for Project Control, Estimating, Planning, Cost Engineering or Commercial Support.

PC - UA 61: Contribute to the use of financial controls and techniques for Project Control, Estimating, Planning, Cost Engineering or Commercial Support

This unit enables the assessment of the learner's competence to interpret and apply financial or accounting controls and techniques in support of improved and informed business or management decisions in relation to cost planning or cost management.

Whilst not expert in finance and accounting practices, it would be expected that Project Control and Cost Engineering practitioners would work with colleagues and peers to implement a culture of: financial and cost awareness using financial and cost management associated practices.

PC - UA 75: Contribute to commercial activities through project control, cost engineering, estimating or planning activities

This unit has been designed to assess the learner's competence to provide commercial support to the operation through Project Control, Cost Engineering Estimating or Planning activities by contributing to the: the evaluation of suppliers, bids or tenders and; the development of bids, or tenders;

The competence contained within this Unit is concerned with both inputting to the evaluation of suppliers and inputting to the development of bids.

This competence may be practiced either as Client organisation selecting a contractor or, a Contracting organisation: selecting a supplier or sub-contractor or; inputting to the response to a bid.

PC - UA 78: Carry out cost control activities through project control, cost engineering, estimating or planning

This unit enables the assessment of the learner's competence to carry out project cost control activities including calculating the cost outcomes through the operation of appropriate control systems, the collection of data and the preparation of specific cost reports.

This unit enables the assessment of the learner's competence through Project Control, Cost Engineering, Estimating or Planning activities.

PC - UA 34: Prepare schedules for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities

This unit enables the assessment of learner's competence to prepare control schedules, through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities from established outline plans, to meet defined project requirements.

PC - UA 57: Contribute to cost or time savings through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities during concept and definition phases

This unit is to assess the learner's competence to work with others in supporting the identification and achievement of target costs or schedules for business deliverables through the application of cost or time minimisation or optimisation through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities during the design and development phase of the life cycle.

PC - UA 59: Promote and progress production or construction efficiency through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities

This unit enables the assessment of the learner's competence to work with others, in applying efficient production or construction practices and methods throughout the life cycle through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities.

It is expected Project Control, Estimating, Planning, Cost Engineering or Commercial Support practitioners will have a good appreciation of engineering design, production or construction, and would work with colleagues and peers to implement good practice cultures such as design for: manufacture, construction, commissioning, lean manufacture or associated practices.

PC - UA 76: Input to the construction or manufacturing execution plan

This unit has been designed to assess learner competence in being able to: interpret the construction or manufacturing execution sequence and plan; establish the impact on project or manufacturing resources; understand the impact of local factors on the plan and; understand how key technologies impact the plan's effectiveness.

Within the context of this unit manufacturing also includes assembly.

3. Level 3 Diploma in Estimating Practice

PC - UA 92: Apply information technology (IT) to estimating

Title	Apply information technology (IT) to estimating
Level	3
Credit value	10
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Apply IT in the execution of estimating for collection and processing of commercial and technical data, reporting current and predicting future status	1.1 Utilise the software tools and IT systems that are required. 1.2 Handle, edit, format and check information and data obtained from a range of internal and external sources. 1.3 Extract, enter, and process information to produce the outputs required by customers. 1.4 Implement the specified security measures to protect the confidentiality and integrity of data held in the IT systems.
2. Support other users of the IT applications in estimating activities	2.1 Share own skills and understanding to help others.
3. Understand the IT systems and the information sources used in estimating activities	3.1 Describe the attributes and limitations of available software tools, including web-based applications. 3.2 Describe the use of procedures and work instructions for the use of IT. 3.3 Describe the operational requirements of the IT systems. 3.4 Describe the sources and flow paths of data used. 3.5 Describe the systems and measures that can be used to ensure data security.
4. Understand the use of the IT applications in estimating activities	4.1 Describe methods of entering and processing information. 4.2 Describe ways of extracting data and formatting reports. 4.3 Describe methods for validation and verification of application outputs.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit enables the assessment of the learner's competence in applying IT in the execution of the estimating function.</p> <p>It is expected that the competence will include the use of proprietary, specialist or bespoke software and IT systems to meet specific functional needs.</p>
Unit expiry date	June 2020
Details of relationship between the unit and the relevant national occupational standards or other professional standards of curricula (if appropriate)	Derived from ECITB NOS Unit PC 2.
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of estimating.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit. Competence at Level 3 has to be demonstrated using:</p> <ol style="list-style-type: none"> 1. Software and IT systems. 2. Range of sources. 3. Customers. 4. Security measures. 5. Appropriate Data Structures. <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering.</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies. 5. Construction, planning and the built environment.
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	November 2014
Unit guided learning hours	52

PC - UA 4: Monitor risks, opportunities and uncertainties and review contingencies in the area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support

Title	Monitor risks, opportunities and uncertainties and review contingencies in the area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support
Level	4
Credit value	5
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Monitor risks, opportunities and uncertainties throughout the course of the project's implementation.	1.1 Ensure that information and advice on identified potential risks, opportunities and uncertainties is received during project development or implementation. 1.2 Assess the consequences of identified risks, opportunities and uncertainties to the commercial outcome of the project. 1.3 Maintain and update records of the commercial implications of identified risks, opportunities and uncertainties.
2. Review, identify and maintain contingencies throughout the course of the project's implementation.	2.1 Make recommendations on financial and schedule contingencies and on action plans to mitigate or promote the consequences of the identified risks, opportunities or uncertainties as appropriate, and the associated provisions for risk mitigation costs or promotion costs. 2.2 Review and amend contingencies and action plans for emerging areas of risk, opportunity and uncertainty. 2.3 Review and amend contingencies and action plans for areas of risk, opportunity or uncertainty that might be retired.
3. Understand the risk, opportunity and uncertainty analysis and management process.	3.1 Describe the methods of identifying and quantifying risks, opportunities or uncertainties. 3.2 Describe the means of presenting risk, opportunity and uncertainty and contingency data. 3.3 Explain potential consequences of risks, opportunities and uncertainties. 3.4 Describe the key aspects of risk, opportunity and uncertainty monitoring techniques. 3.5 Describe the key aspects of the use of Risk Management Software. 3.6 Describe the basis of statistical evaluation processes for carrying out risk analysis opportunity and uncertainties.
4. Understand the relationship between risk opportunity and uncertainty analysis and management of these requirements.	4.1 Describe how contingency and allowance management relates to risk opportunity. 4.2 Describe techniques for collecting and evaluating information. 4.3 Describe how Information sources internal and external can be used to support the risk, opportunity and uncertainty process. 4.4 Describe the organisational systems and procedures for risk management. 4.5 Describe risk implications arising from National, European and local regulations and codes of practice.

Additional information about this unit	
Unit purpose and aim(s)	This unit enables the assessment of the learner's competence to monitor risks, opportunities and uncertainties and to review contingencies in the area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support. The context is the commercial impact on a project of the potential risks, opportunities and uncertainties to schedule cost, performance or specification.
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 4
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Potential risks 2. Consequences (on) Costs <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	15

PC - UA 93: Apply the quality management system in relation to estimating

Title	Apply the quality management system in relation to estimating
Level	3
Credit value	7
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Apply the quality management system procedures and methods.	1.1 Identify the procedures within your company's quality management system (QMS) that must be followed for the execution of your activities. 1.2 Apply the relevant procedures, methods and systems necessary for effective control. 1.3 Maintain records on the use of procedures, methods and systems to comply with quality assurance audits
2. Participate in reviews and contribute to resolution of non-conformances	2.1 Review the application of the procedures, methods and systems and identify any necessary changes. 2.2 Identify corrective actions to deal with non-conformance and to limit their effects.
3. Understand the relevant estimating procedures, methods and systems.	3.1 Describe the procedures and methods specifically relevant to your role. 3.2 Describe how procedures, methods and systems relevant to your role fit into the overall quality management systems within your organisation. 3.3 Describe the reporting requirements and methods that conform to the QMS including methods for demonstrating compliance.
4. Understand the quality assurance process	4.1 Describe the quality management framework within the organisation. 4.2 Explain the limitation of personal authority to make changes to procedures, methods and systems. 4.3 Describe the national and international quality assurance codes and standards used by the organisation.

Additional information about this unit	
Unit purpose and aim(s)	This unit enables the assessment of the learner's competence to apply; estimating procedures; agreed quality procedures; methods and; systems within their company. It also enables the assessment of the learner's competence to support a culture of quality and the associated practices.
Unit expiry date	June 2020
Details of relationship between the unit and the relevant national occupational standards or other professional standards of curricula (if appropriate)	Derived from ECITB NOS Units: ECIPC7 and ECIPC28.
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Procedures methods and systems. 2. Quality assurance procedures. 3. Non conformance. 4. Corrective actions. 5. Audits. <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering.</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies. 5. Construction, planning and the built environment.
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	November 2014
Unit guided learning hours	25

PC - UA 94: Retrieve, record and present estimating related information

Title	Retrieve, record and present estimating information
Level	3
Credit value	5
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Retrieve, record and present estimating information	1.1 Check that the specified sources are capable of providing information and data that can be processed to meet the estimating requirements. 1.2 Interrogate and process information and data using methods approved for use. 1.3 Record the results of processing the information and data in timely manner compatible with the agreed schedules. 1.4 Apply the systems for information retrieval and storage that are approved for use. 1.5 Establish and record the context in which the information or data is valid. 1.6 Capture and record outturn data so that this can be re-used.
2. Verify the quality of the information and data, and its control and protection.	2.1 Refer to the responsible people, problems that arise when information is found to be inadequate for its intended use. 2.2 Ensure that the protection of information accords with its value to the organisation, is in accordance with agreed stipulations from the providers, and complies with the customer's and organisation's procedures. 2.3 Apply a project or contract baseline that provides a basis for change control.
3. Understand the process for retrieval, recording and presenting estimating related information.	3.1 Describe sources of information suitable for the activity. 3.2 Explain how to derive information from information sources. 3.3 Explain principles and methods for organising, storing, and retrieving information. 3.4 Describe systems and methods for processing estimating information and data.
4. Understand the processes for protecting and controlling data.	4.1 Describe procedures and systems for security and confidentiality of information. 4.2 Explain why version control of information is important. 4.3 Describe the principles of base-lining information.

LEVEL 3 DIPLOMA IN ESTIMATING PRACTICE

Additional information about this unit	
Unit purpose and aim(s)	This unit enables the assessment of the learner's competence in the retrieval, recording and presenting of estimating related information and checking the received information and output data is of the required quality, and is protected.
Unit expiry date	June 2020
Details of relationship between the unit and the relevant national occupational standards or other professional standards of curricula (if appropriate)	Derived from ECITB NOS Unit PC 8.
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of estimating.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities. There are no mandatory workplace observations for this unit. Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Information. 2. Providers. 3. Sources of Information. 4. Systems for information storage. 5. Protection. <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering.</p> <p>Sector/subject areas</p> <p>4. Engineering and manufacturing technologies.</p> <p>5. Construction, planning and the built environment.</p>
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	November 2014
Unit guided learning hours	20

PC - UA 14: Develop personal competencies in the professional work role in Project Control, Estimating, Planning, Cost Engineering or Commercial Support

Title	Develop personal competencies in the professional work role in Project Control, Estimating, Planning, Cost Engineering or Commercial Support
Level	3
Credit value	2
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Manage personal and professional development on a continuous basis.	1.1 Assess current competence and areas for development using relevant techniques and processes. 1.2 Identify and plan development objectives that are realistic, achievable, and related to personal and business needs. 1.3 Develop knowledge, understanding, and skills in line with a development plan and take advantage of any unplanned opportunities that may arise. 1.4 Review performance regularly and use the outcome to plan future development activities. 1.5 Seek and obtain constructive feedback and advice from others and use it to help them maintain and improve performance. 1.6 Agree with line managers the time and other resources needed to help achieve the development objectives. 1.7 Ensure progress is regularly reviewed and use the feedback to continue personal and professional development to meet the demands of changing situations
2. Understand the processes for agreeing personal objectives, and development plans.	2.1 Describe the skills and knowledge required for the current role. 2.2 Describe the skills and knowledge required for planned future roles. 2.3 Describe working relationships. 2.4 Describe reporting lines and procedures. 2.5 Describe development objective setting. 2.6 Describe how personal development and skills development training progress assessments can be carried out.
3. Understand the sources available for learning and development.	3.1 Describe what learning opportunities and resources are available. 3.2 Describe the sources of guidance and advice on training and technical skills development.
4. Understand the need for continued professional development.	4.1 Explain the requirements for continuing professional development.

Additional information about this unit	
Unit purpose and aim(s)	This unit enables assessment of the learner's competence to manage their own personal and professional development within Project Control, Estimating, Planning, Cost Engineering or Commercial Support on a continuous basis.
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 14
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competence at Level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Development objectives 2. Support to achieve development <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	5

PC - UA 17: Contribute to effective Project Control, Estimating, Planning, Cost Engineering or Commercial Support relationships

Title	Contribute to effective Project Control, Estimating, Planning, Cost Engineering or Commercial Support relationships
Level	3
Credit value	3
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Contribute to effective working relationships: within the project, functional teams and other associated organisations	1.1 Deal with disagreements in an amicable and constructive way, to ensure good relationships are maintained. 1.2 Maintain good relationships in the interests of performing assigned responsibilities. 1.3 Keep others informed about work plans or activities that affect them. 1.4 Seek assistance from others in a polite and courteous way without causing undue disruption to normal work activities. 1.5 Respond in a timely and positive way when others ask for help or information.
2. Understand the creation and maintenance of working relationships.	2.1 Explain how to create and maintain working relationships. 2.2 Explain how problems can have a negative affect on the effectiveness of working relationships.
3. Understand the group of people they need to communicate and work with.	3.1 Describe the Lines of communication within the project or function and between participants. 3.2 Describe the responsibilities and authority of project or functional team participants. 3.3 Describe the groups and individuals with whom they need to maintain good working relationships.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit enables the assessment of the learner’s competence in developing and maintaining Project Control, Estimating, Planning, Cost Engineering or Commercial Support relationships to assist in delivery of assigned responsibilities to the benefit of the project, function or organisation overall.</p> <p>“Colleagues” are any person the learner must have a working relationship with regardless of status, position, organisation or function they belong to.</p>
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 17
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competence at level 3 has to be demonstrated with:</p> <ol style="list-style-type: none"> Colleagues <p>The requirements found in the latest version of the ‘ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications’ must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <p>4. Engineering and manufacturing technologies</p> <p>5. Construction, planning and the built environment</p>
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	15

PC - UA 18: Observe and apply professional Project Control, Estimating, Planning, Cost Engineering or Commercial Support ethics and values

Title	Observe and apply professional Project Control, Estimating, Planning, Cost Engineering or Commercial Support ethics and values
Level	3
Credit value	2
Learning outcomes	Assessment Criteria
The learner will: 1. Observe and apply professional ethics and values.	The learner can: 1.1 Keep informed about the professional ethics that should be applied. 1.2 Incorporate the application of professional ethics and values into professional activities. 1.3 Be aware of the professional codes of conduct, standards, regulations and guidelines that are relevant to professional activities. 1.4 Maintain a duty of care towards clients and customers. 1.5 Identify and report any potential or actual cases of professional malpractice in accordance with approved procedures. 1.6 Identify the authoritative sources of information on professional ethics and values.
2. Effectively resolve conflicts of interest.	2.1 Identify and report any conflicts of interest in accordance with approved procedures.
3. Understand the areas where professional ethics and values apply in the execution of work.	3.1 Describe where to obtain authoritative sources information on professional codes of conduct, standards, regulations and guidelines relevant to activities. 3.2 Describe what constitutes a duty of care. 3.3 Explain what types of conflict of interest and professional malpractice could occur and how should they be resolved. 3.4 Describe who can be contacted within the organisation for guidance and advice In the event of uncertainty over a professional ethics and values issue. 3.5 Describe how the following are reflected in the values of the organisation: health, safety and environmental regulations, codes and practices applicable to the organisation, the business and its industrial sector. 3.6 Describe the legislative and regulatory frameworks within which the organisation carries out its business.
4. Understand techniques for managing commercially sensitive information.	4.1 Describe how the commercial confidentiality of information supplied to, and held within, the organisation is safeguarded: typically own, suppliers or clients information.

Additional information about this unit	
Unit purpose and aim(s)	This unit enables assessment of the learner's competence to observe and apply integrity and professional ethics and values in the execution of their Project Control, Estimating, Planning, Cost Engineering or Commercial Support responsibilities.
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 18
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Application of professional ethics 2. Those responsible <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	10

PC - UA 95: Identify and quantify emerging changes through estimating activities

Title	Identify and quantify emerging changes through estimating activities
Level	4
Credit value	7
Learning outcomes	Assessment Criteria
The learner will: 1. Identify and quantify emerging changes through estimating activities.	The learner can: 1.1 Review and evaluate progress against schedules and budgets. 1.2 Ensure that clear authorisation for all stages of work have been given. 1.3 Ensure the activities and resources are monitored, and controlled in line with the plans, budgets, or schedules and where necessary adjusted. 1.4 Identify areas requiring change and seek opportunities to minimise disruption. 1.5 Consult with stakeholders and make agreed adjustments to activities, resources and plans. 1.6 Ensure that adjustments are accurately coded, recorded and stored securely. 1.7 Ensure that both internal and external changes are scoped and approved before committing to implementation.
2. Understand the methods used in estimating for identifying and quantifying emerging changes	2.1 Describe examples of how to minimise disruption where changes are needed. 2.2 Explain methods that can be used for maintaining change control. 2.3 Describe methods for keeping stakeholders informed of the implications of changes to scope and completion. 2.4 Describe means of obtaining team members agreement to changes in plans.
3. Understand the change management process.	3.1 Describe the practices and procedures for classifying and managing both internal and external changes.

Additional information about this unit	
Unit purpose and aim(s)	This unit enables the assessment of the learner's competence to identify and quantify emerging changes through estimating activities whether caused by internal or external difficulties or opportunities.
Unit expiry date	June 2020
Details of relationship between the unit and the relevant national occupational standards or other professional standards of curricula (if appropriate)	Derived from ECITB NOS Unit PC 49
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of estimating.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit. Competences at Level 4 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Types of review and evaluation. 2. Changes. 3. Stakeholders. <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	November 2014
Unit guided learning hours	20

PC - UA 24: Prepare cost estimates through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities

Title	Prepare cost estimates through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities
Level	3
Credit value	6
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Prepare cost estimates for defined scopes of work at any stage of their life cycle.	1.1 Prepare estimates using specified methods for defined phases of the life cycle 1.2 Estimate the quantity and cost of resources required for activities to the required accuracy. 1.3 Clearly state any assumptions and exclusions on which estimates are based. 1.4 Estimate the relevant timescales to the required level of accuracy. 1.5 Estimate cash flows or profile the resource requirements over the relevant task timescales to the required level of accuracy. 1.6 Identify contingencies and allowances and the basis for them. 1.7 Assess the scope and consequences of changes. 1.8 Explain how the estimated resources meet the requirements and allow for impacts of market conditions on key resources if applicable.
2. Understand the processes for developing an estimate at various levels of scope definition.	2.1 Explain fixed and variable, direct costs, indirect costs, allowances and contingencies. 2.2 Explain risk, opportunity and uncertainty identification and management techniques. 2.3 Describe the sources of information needed for estimating. 2.4 Describe the key aspects of whole life costing. 2.5 Describe means of specifying resources. 2.6 Describe styles and formats for presenting information. 2.7 Describe the impact on the estimate of commercial, financial and contractual practices. 2.8 Describe the key aspects of the application of work breakdown and coding structures. 2.9 Describe how accuracy is related to the level of information available and stage of the project.
3. Understand estimating techniques.	3.1 Describe examples of current good practice in estimating and cost engineering, and how it is supported by benchmarking. 3.2 Explain the application of appropriate software in support of estimating. 3.3 Explain the key aspects of Value Engineering management techniques and principles. 3.4 Explain the key aspects of the Benchmarking and Normalisation processes.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit enables assessment of the learner's competence to prepare cost estimates for defined scopes of work at any stage through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities.</p> <p>This includes the need to predict, specify and determine: resources for the component activities and estimate total costs for any project stage. The resources and estimate total costs for the component activities of continuing activities, such as operations and maintenance for a given period, typically a year, 5 years etc.</p> <p>A project or proposal may be limited in its scope to a phase of the life cycle such as acquisition or in-service support.</p>
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 24
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Resources. 2. Required accuracy. 3. Methods of estimating resources. 4. Contingencies and allowances <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	20

PC - UA 33: Prepare budgets for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities

Title	Prepare budgets for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities
Level	3
Credit value	4
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Prepare budgets for control of work scope delivery.	1.1 Verify that resources required for activities are estimated and specified accurately. 1.2 Prepare the control budgets using the cost estimates, the project schedules and the breakdown structure. 1.3 State any assumptions made in preparing the control budgets in a basis of estimate document. 1.4 Create control budgets with the required degree of accuracy. 1.5 Recommend where contingencies and allowances may be needed within the budgets. 1.6 Accurately assess the scope and consequences of changes.
2. Support stakeholder's agreement to budget.	2.1 Prepare the project cash flow or cost and resource profile requirements for agreement by stakeholders.
3. Understand the processes required to prepare a control budget.	3.1 Describe classes of estimate and the purposes and limitations. 3.2 Describe methods of determining time, cost and quality relationships and their influence on the accuracy of the budget. 3.3 Describe direct costs, indirect costs, contingencies, allowances, and fixed and variable costs. 3.4 Describe methods of increasing accuracy of budgets. 3.5 Describe methods of projecting timescales and cash flow or cost and resource profile requirements. 3.6 Describe means of preparing budgets for finance, human, material resources, facilities and information. 3.7 Describe styles and formats for presenting budget information.
4. Understand supporting processes to control budget preparation.	4.1 Describe the sources of information required to support benchmarking budgets. 4.2 Describe the application of software to prepare control budgets. 4.3 Describe the alignment of costs to breakdown and coding structures used in developing schedules.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit enables the assessment of the learner's competence to prepare the budgets through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities from established estimates of resources, to meet defined project requirements.</p> <p>This will include for the competence to assist in the evaluation of budgetary requirements and implications within a schedule.</p>
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 33
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Resources. 2. Degree of accuracy. 3. Contingencies and allowances. <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	14

PC - UA 53: Generate and use statistical data for Project Control, Estimating, Planning, Cost Engineering or Commercial Support

Title	Generate and use statistical data for Project Control, Estimating, Planning, Cost Engineering or Commercial Support
Level	4
Credit value	4
Learning outcomes	Assessment Criteria
The learner will: 1. Generate and use statistical data.	The learner can: 1.1 Make adjustments to data to allow equitable comparisons to be made across different contexts sometimes known as normalisation. ³⁶ 1.2 Demonstrate the appropriate application of descriptive statistics to Project Control, Estimating, Planning, Cost Engineering or Commercial Support information. 1.3 Identify any underlying trend in time-based or sequential data in order to interpolate or extrapolate to a given point. 1.4 Resolve data anomalies using logical methods. 1.5 Provide suitable graphical representation of statistical data as an aid to analysis.
2. Understand the techniques for statistical analysis.	2.1 Describe the sources of primary, secondary or tertiary data. 2.2 Describe the terminology used to reflect time-based differences examples include base year, current year or then year 2.3 Describe the interpretation of published indices from governmental or commercial sources. 2.4 Describe the measures of central tendency 2.5 Describe the methods for identifying statistical outliers, or non-representative data points.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit enables the assessment of the learner's competence to collect, compile and use any observed or reported data in relation to Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities and outputs.</p> <p>The practitioners are expected to make judgements using recognised statistical procedures.</p>
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 53
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Normalisation Contexts 2. Descriptive Statistics used 3. Purpose or Content <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	24

PC - UA 55: Apply learning curve models to recurring tasks for Project Control, Estimating, Planning, Cost Engineering or Commercial Support

Title	Apply learning curve models to recurring tasks for Project Control, Estimating, Planning, Cost Engineering or Commercial Support
Level	3
Credit value	5
Learning outcomes	Assessment Criteria
The learner will: 1. Apply learning curve models	The learner can: 1.1 Prepare input data from which a learning curve model is to be generated. 1.2 Research the rate of learning to be achieved on a given or similar task by reference to standards in use or subject matter experts. 1.3 Calculate single point values, batch costs, and batch average costs or schedule durations from a defined learning model. 1.4 Depict a learning curve graphically in linear and logarithmic forms. 1.5 Document the basis of the learning curve model and its parameters in relation to any learning curve drivers, as part of a formal basis of estimate.
2. Understand the basics of learning curve theory.	2.1 Describe the learning curve model for cost or schedule improvement to be adopted, and its mathematical formula. 2.2 Describe the principles of learning in relation to the model used. 2.3 Describe examples of the use of any standard learning curve rates adopted for given or similar products, processes or services. 2.4 Describe the impact on learning of disruption in the continuity of production. 2.5 Describe use of learning curve breakpoints. 2.6 Demonstrate the graphical depiction of learning curves in linear and logarithmic space.

Additional information about this unit	
Unit purpose and aim(s)	This unit enables the assessment of the learner's competence to apply learning curve theory as a predictive technique for future costs or schedule for Project Control, Estimating, Planning, Cost Engineering or Commercial Support.
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 55
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competence at Level 3 has to be demonstrated using:</p> <ol style="list-style-type: none"> 1. Level or Elements to which learning is applied (3 from 6): <ul style="list-style-type: none"> • Process learning • Product learning • Organizational (cross-product) learning • Batch learning • Labour costs • Total costs 2. Cost Drivers (4 from 9): <ul style="list-style-type: none"> • Output rate • Design Engineering support to manufacture • Production Engineering support (methods and tools) • Operator motivation • Logistical support • Supervision • Quality Management • Law of diminishing returns / End-of-Line Effects • Continuity/discontinuity of production 3. Model Types (1 from 9): <ul style="list-style-type: none"> • Crawford (unit) • Wright (cumulative average) • De Jong (fixed element) • Standford-B (prior experience) • S-Curve (fixed element + prior experience) • Jones Segmentation method (cost driver modelling) • Cumulative value methods • Anderlohr method (for assessing lost learning) • Other Models <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>

LEVEL 3 DIPLOMA IN ESTIMATING PRACTICE

Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	Second-tier sector/subject area 4.1 Engineering Sector/subject areas 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	15

PC -UA 61: Contribute to the use of financial controls and techniques for Project Control, Estimating, Planning, Cost Engineering or Commercial Support

Title	Contribute to the use of financial controls and techniques for Project Control, Estimating, Planning, Cost Engineering or Commercial Support
Level	3
Credit value	3
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Contribute to the application of financial or accounting controls and techniques in support of improved and informed business or management decisions.	1.1 Contribute to the application of agreed rates and margin to a commercial proposal in line with the organisation's Accounting System methodology. 1.2 Contribute to creating a budget breakdown from an agreed commercial price. 1.3 Prepare a cash flow forecast for an investment or business opportunity. 1.4 Apply appropriate control over business expenditure in relation to throughput or output of business deliverables. 1.5 Conduct cost-benefit or cost-volume-profit analysis to ensure a return on investment. 1.6 Support the analysis of business performance and the retirement of contingency to margin.
2. Understand the processes for Interpreting and applying financial or accounting controls.	2.1 Describe the accounting or costing system methodology used within the business. 2.2 Describe what is meant by capital expenditure and depreciation. 2.3 Describe the difference between costing rates and pricing rates. 2.4 Describe the common financial ratios and their uses.
3. Understand the basis for accounting processes.	3.1 Describe accounting concepts, including general accepted accounting techniques within the business such as GAAP, SOX etc.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit enables the assessment of the learner's competence to interpret and apply financial or accounting controls and techniques in support of improved and informed business or management decisions in relation to cost planning or cost management.</p> <p>Whilst not expert in finance and accounting practices, it would be expected that Project Control and Cost Engineering practitioners would work with colleagues and peers to implement a culture of: financial and cost awareness using financial and cost management associated practices.</p>
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 61
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Accounting/Costing System Methodology 2. Accounting Concepts 3. Purpose or Content <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	20

PC - UA 75: Contribute to commercial activities through project control, cost engineering, estimating or planning activities

Title	Contribute to commercial activities through project control, cost engineering, estimating or planning activities
Level	4
Credit value	8
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Contribute to the selection of suppliers and the development of bids and tenders.	1.1 Contribute to the evaluation criteria for suppliers and bids by providing relevant criteria information against which they should be assessed. 1.2 Contribute to the selection of suppliers who are able to meet the contract or business specifications. 1.3 Contribute to tender documents or requests for quotation that meet the operational requirements, technical requirements, procurement strategies, and applicable legislative and regulatory requirements.
2. Evaluate submissions from potential suppliers and input to recommendations on bids and tenders.	2.1 Contribute to the evaluation of potential suppliers and tenders against agreed selection criteria. 2.2 Respond to queries from potential suppliers providing them with additional information that they need. 2.3 Maintain records of your contribution to supplier selection, bid creation and/or tender evaluation and the reasons for your input.
3. Understand the processes required to: identify suppliers and; how to create the evaluation framework for assessing potential suppliers and bids.	3.1 Describe the specific criteria for selecting suppliers that are suitable for the work required 3.2 Describe the roles, responsibilities, and authorities of the parties involved in creating the evaluation framework process. 3.3 Describe why records should be kept of the process for operational and for legal protection reasons. 3.4 Describe the different contract types, commercial terms and conditions relevant to your business.
4. Understand the processes required to evaluate supplier and bid submissions and making recommendations on bids or tenders.	4.1 Describe the selection process for comparing and evaluating bids including the roles of those involved. 4.2 Describe the process for confirming variations and other adjustments made to a tender or bid as a result of queries resolved during the evaluation process. 4.3 Describe the means of referring and resolving queries concerning the content of bids or tenders. 4.4 Describe the ethical and commercial confidentiality considerations in the selection process.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess the learner's competence to provide commercial support to the operation through Project Control, Cost Engineering Estimating or Planning activities by contributing to the: the evaluation of suppliers, bids or tenders and; the development of bids, or tenders;</p> <p>The competence contained within this Unit is concerned with both inputting to the evaluation of suppliers and inputting to the development of bids.</p> <p>This competence may be practiced either as Client organisation selecting a contractor or, a Contracting organisation: selecting a supplier or sub-contractor or; inputting to the response to a bid.</p>
Unit expiry date	June 2020
Details of relationship between the unit and the relevant national occupational standards or other professional standards of curricula (if appropriate)	Derived from ECITB NOS Units - ECIPC39 and ECIPC40.
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Cost Engineering Estimating or Planning.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 4 should be demonstrated with evidence from or related to:</p> <ol style="list-style-type: none"> 1. Stakeholders 2. Potential suppliers and/or tenderers. 3. Criteria set 4. tender documents/ bid documents 5. Different contract types and commercial terms in use within the business in which the learner works and which are directly relevant to the learner's role within the business <p>Evidence can be provided for Learner outcomes 1 and 3 in relation to bid development or response to bids.</p> <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area 4.1 Engineering.</p> <p>Sector/subject areas 4. Engineering and manufacturing technologies. 5. Construction, planning and the built environment.</p>
Name of the organisation submitting the unit	ECITB
Availability for use	Shared

LEVEL 3 DIPLOMA IN ESTIMATING PRACTICE

Unit available from	July 2014
Unit guided learning hours	25

PC - UA 78: Carry out cost control activities through project control, cost engineering, estimating or planning

Title	Carry out cost control activities through project control, cost engineering, estimating or planning
Level	4
Credit value	9
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Carry out cost control activities.	1.1 Provide information to support the establishment of the performance measurement baseline budget and management reserve. 1.2 Assist in the provision of a bridge between the performance measurement baseline and the output from a risk, opportunity and uncertainty analysis. 1.3 Collect exposure, commitment and expenditure data, validate and check allocation to the correct accounts code or breakdown element, in accordance with requirements. 1.4 Record and report on commitments against allocated funding. 1.5 Incorporate the effects of changes in scope in line with company procedures. 1.6 Monitor project cash flow in line with company procedures. 1.7 Prepare cost reports, as required by the customer.
2. Calculate the cost outcomes of activities	2.1 Analyse performance to date and reconcile with the corresponding basis of estimate. 2.2 Generate forecast at completion, based on existing and expected performance. 2.3 Calculate expenditure phasing in line with company procedures. 2.4 Identify, quantify and check that the actual and predicted variances are accurate and comply with agreed financial control procedures. 2.5 Process and maintain budget and address variances in line with company procedures.
3. Support Stakeholders understanding of variances and their implications.	3.1 Support the compilation of the information, as required, to support explanations of variances, causes, implications, and potential recommendations for action for stakeholders.
4. Understand the processes required to carry out cost control.	4.1 Describe exposure, commitment and expenditure systems and, their application. 4.2 Describe methods and procedures for assessing and presenting cost control monitoring and forecasting information. 4.3 Describe the progress measurement and earned value process and its relation to cost control and the baseline estimate. 4.4 Describe the relationship between cost and the schedule. 4.5 Describe methods of evaluating the cost impact of schedule and strategy change. 4.6 Describe the interface between cost engineering and other disciplines. 4.7 Describe variance identification and methods of its management. 4.8 Describe methods of assessing actual cost against budget profile. 4.9 Describe the application of change control procedures and systems. 4.10 Describe the use of work breakdown and coding structures for reporting and analysis.
5. Understand other processes relating to cost control	5.1 Describe sources of specialist advice. 5.2 Explain contingency allocation and management within your business.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit enables the assessment of the learner's competence to carry out project cost control activities including calculating the cost outcomes through the operation of appropriate control systems, the collection of data and the preparation of specific cost reports.</p> <p>This unit enables the assessment of the learner's competence through Project Control, Cost Engineering, Estimating or Planning activities.</p>
Unit expiry date	June 2020
Details of relationship between the unit and the relevant national occupational standards or other professional standards of curricula (if appropriate)	Derived from ECITB NOS Units: ECIPC36 and ECIPC45.
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competence at Level 3 has to be demonstrated in relation to cost activities including cost outcomes and with:</p> <ol style="list-style-type: none"> 1. Income and expenditure control systems. 2. Cost outcome and final expenditure 3. Exposure and expenditure. 4. Variances. 5. Stakeholders. <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area 4.1 Engineering.</p> <p>Sector/subject areas 4. Engineering and manufacturing technologies. 5. Construction, planning and the built environment.</p>
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	July 2014
Unit guided learning hours	30

PC - UA 34: Prepare schedules for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities

Title	Prepare schedules for control purposes through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities
Level	3
Credit value	4
Learning outcomes	Assessment Criteria
The learner will:	The learner can:
1. Prepare schedules for the control of work scope delivery	1.1 Verify that all the essential work activities have been identified in sufficient detail to serve as a basis for developing the control schedules. 1.2 Prepare control schedules using of the outline schedules and the breakdown structure for control purposes 1.3 Use the resources specified for activities in the schedule to create the data for preparing the resourced schedules that will meet the requirements of detailed analysis and review. 1.4 State clearly any assumptions made in preparing the control schedules in a basis of schedule document. 1.5 Create control schedules with the required degree of accuracy using the logical work sequence. 1.6 Recommend where contingencies and allowances may be needed within the control schedules. 1.7 Accurately assess the scope and consequences of change. 1.8 Check that the developed timescales are consistent with achieving a successful outcome. 1.9 Identify key dates and milestones in the control schedule. 1.10 Check compatibility between the control schedule and progress monitoring systems and methods.
2. Support obtaining Stakeholders agreement to the control schedule.	2.1 Support the presentation of the control schedules to stakeholders
3. Understand the processes required to prepare a control schedule.	3.1 Describe methods of preparing, structuring, and presenting schedules. 3.2 Describe the dependencies and restraints between starts and ends of activities. 3.3 Describe the determination and understanding of critical paths. 3.4 Describe how to deal with uncertainty. 3.5 Describe the scheduling of resources determined by demand. 3.6 Describe the significance of the terms: events, activities, types of logic and float. 3.7 Describe the use of work activity and earned value analysis techniques. 3.8 Describe the importance of schedule version control. 3.9 Describe the key aspects of breakdown and coding structures relevant to developing schedules. 3.10 Describe sources of information.
4. Understand supporting processes to control schedule preparation.	4.1 Describe the sources of benchmarking information required to prepare control schedules. 4.2 Describe the application of appropriate software.

Additional information about this unit	
Unit purpose and aim(s)	This unit enables the assessment of learner's competence to prepare control schedules, through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities from established outline plans, to meet defined project requirements.
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 34
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Degree of accuracy 2. Stakeholders 3. Presentation <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	14

PC - UA 57: Contribute to cost or time savings through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities during concept and definition phases

Title	Contribute to cost or time savings through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities during concept and definition phases
Level	3
Credit value	8
Learning outcomes	Assessment Criteria
The learner will: 1. Work with others, in establishing during the concept and definition phases target costs or schedules for business deliverables via the application of: cost or time minimisation or cost or time optimisation	The learner can: 1.1 Allocate target costs or milestones and investigate the anticipated quantities required for a range of business deliverables. 1.2 Understand and interpret the design requirements or design intent of the business or project deliverables. 1.3 Identify the key functional elements of the design requirements. 1.4 Support the identification of the key cost or schedule drivers associated with achieving the functional parameters. 1.5 Maintain cost or schedule models or cost or schedule response curves. 1.6 Review concept and definition options, cost or schedule performance trade-offs, and identify cost or schedule avoidance or cost or schedule reduction objectives.
2. Understand the processes for cost or time minimisation and optimisation.	2.1 Describe the principles of target costing or scheduling. 2.2 Describe the Principles of value analysis and value engineering. 2.3 Describe the principles of process improvement. 2.4 Describe engineering design principles and practice. 2.5 Describe the key features of associated technologies; processes and facilities 2.6 Describe cost or schedule modelling techniques.
3. Understand techniques required to facilitate process or cost improvement workshops.	3.1 Describe how to set up process or cost improvement workshops. 3.2 Describe how to facilitate a process or cost improvement workshop 3.3 Describe the actions necessary to capture and record workshop events and decisions. 3.4 Describe brainstorming techniques

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit is to assess the learner's competence to work with others in supporting the identification and achievement of target costs or schedules for business deliverables through the application of cost or time minimisation or optimisation through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities during the design and development phase of the life cycle.</p> <p>It is expected that practitioners would work with colleagues and peers to implement a culture of: target costing, value engineering or associated practices.</p>
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 57
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Key Stakeholder 2. Cost / Schedule Type (4 from 7): <ul style="list-style-type: none"> • Acquisition Design and Development Cost/Schedule. • Acquisition Manufacture Cost/Schedule. • Operational / Maintenance and Support Cost/Schedule. • Disposal Cost/Schedule. • Life Cycle, Through-Life or Whole Life Cost/Schedule. • Cost/Schedule of Construction / Installation. • Commissioning Cost/Schedule. <p>There are no mandatory workplace observations for this unit.</p> <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <ol style="list-style-type: none"> 4. Engineering and manufacturing technologies 5. Construction, planning and the built environment
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	30

PC - UA 59: Promote and progress production or construction efficiency through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities

Title	Promote and progress production or construction efficiency through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities
Level	3
Credit value	8
Learning outcomes	Assessment Criteria
The learner will: 1. Work with others, in establishing efficient production or construction practices and methods throughout the life cycle.	The learner can: 1.1 Use technical information or specifications to enable the potential production or construction costs to be estimated or scheduled. 1.2 Monitor and report on areas of potential production or construction inefficiencies or non-value added costs. 1.3 Contribute to production or construction cost reduction. 1.4 Use appropriate cost models to support design or method alterations to promote production or construction efficiency improvements. 1.5 Contribute to initiatives to minimise waste of raw material. 1.6 Participate in the review the feasibility of proposed design solutions in relation to the production or construction capability available.
2. Understand the processes for establishing efficient production or construction practices and methods.	2.1 Describe the principles of design for manufacture or assembly or construction. 2.2 Describe the principles of method study and work measurement. 2.3 Describe the principles of process improvement 2.4 Demonstrate an appreciation of the key features of associated delivery technologies, processes and facilities 2.5 Describe cost or schedule modelling techniques.
3. Understand techniques to facilitate developing of new options.	3.1 Explain lateral thinking and brainstorming techniques.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit enables the assessment of the learner's competence to work with others, in applying efficient production or construction practices and methods throughout the life cycle through Project Control, Estimating, Planning, Cost Engineering or Commercial Support activities.</p> <p>It is expected Project Control, Estimating, Planning, Cost Engineering or Commercial Support practitioners will have a good appreciation of engineering design, production or construction, and would work with colleagues and peers to implement good practice cultures such as design for: manufacture, construction, commissioning, lean manufacture or associated practices.</p>
Unit expiry date	31/10/2015
Details of the relationship between the unit and relevant National Occupational Standards or other professional standards or curricula (if appropriate)	Derived from ECITB NOS Unit PC 59
Assessment requirements or guidance specified by a sector regulatory body (if appropriate)	<p>This unit must be assessed in the occupational area of Project Control, Estimating, Planning, Cost Engineering or Commercial Support.</p> <p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from worked-based activities.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Competences at Level 3 have to be demonstrated with:</p> <ol style="list-style-type: none"> 1. Resources (3 out of 6): <ul style="list-style-type: none"> • People. • Materials and equipment. • Facilities. • Finance and cash. • Data and data handling systems. • Services from within the organisation and from outside the organisation. 2. Appropriate people (2 out of 3): <ul style="list-style-type: none"> • Colleagues. • Senior project control staff. • Functional and project managers. <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area</p> <p>4.1 Engineering</p> <p>Sector/subject areas</p> <p>4. Engineering and manufacturing technologies</p> <p>5. Construction, planning and the built environment</p>
Name of the organisation submitting the unit	ECITB

LEVEL 3 DIPLOMA IN ESTIMATING PRACTICE

Availability for use	Shared
Unit available from	01/11/2010
Unit guided learning hours	30

PC - UA 76: Input to the construction or manufacturing execution plan

Title	Input to the construction or manufacturing execution plan
Level	3
Credit value	5
Learning outcomes	Assessment Criteria
The learner will: 1. Input to the construction or manufacturing execution plan and construction or manufacturing sequence.	The learner can: 1.1 Input to the construction or manufacturing execution plan and construction or manufacturing sequence. 1.2 Interpret the construction or manufacturing sequence and its implications in relation to your role. 1.3 Interpret the requirements of the construction or manufacturing execution plan in relation to your role.
2. Understand and interpret the construction or manufacturing plan.	2.1 Explain how the construction or manufacturing execution plan, construction or manufacturing sequence and related documents dictate how the work will progress. 2.2 Explain the principles of construction or logistics of manufacturing and explain their importance across the project life-cycle. 2.3 Describe the consequences of not taking into account the local factors and risks that may influence construction or manufacturing progress. 2.4 Describe how the key technologies and operational processes impact on the effectiveness and/or efficiency of the construction or manufacturing execution plan. 2.5 Describe the cost or schedule modelling techniques that support the development of the construction or manufacturing execution plan.

Additional information about this unit	
Unit purpose and aim(s)	<p>This unit has been designed to assess learner competence in being able to: interpret the construction or manufacturing execution sequence and plan; establish the impact on project or manufacturing resources; understand the impact of local factors on the plan and; understand how key technologies impact the plan's effectiveness.</p> <p>Within the context of this unit manufacturing also includes assembly.</p>
Unit expiry date	June 2020
Details of relationship between the unit and the relevant national occupational standards or other professional standards of curricula (if appropriate)	Derived from: ECIMECA01.
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>Assessment of this unit will be by occupationally competent assessors approved by an awarding body. They will gather sufficient evidence of competence from work-based activities on suitable engineering construction industry sites or suitable manufacturing/assembly sites/plants.</p> <p>There are no mandatory workplace observations for this unit.</p> <p>Professional discussion is allowed to prove competence for assessment Criteria 1.1 as a learner may join a project after this stage has been completed.</p> <p>The requirements found in the latest version of the 'ECITB Assessment Strategy for Craft, Technician, Technical, Expediting and Project Control Suite Vocational Qualifications' must be followed.</p>
Support for the unit from a SSC or other appropriate body (if required)	ECITB
Location of the unit within the subject/sector classification system	<p>Second-tier sector/subject area 4.1 Engineering.</p> <p>Sector/subject areas 4. Engineering and manufacturing technologies. 5. Construction, planning and the built environment.</p>
Name of the organisation submitting the unit	ECITB
Availability for use	Shared
Unit available from	July 2014
Unit guided learning hours	20



Engineering Construction Industry Training Board

Blue Court, Church Lane, Kings Langley, Hertfordshire, WD4 8JP
Tel: 01923 260000 Fax: 01923 270969

www.ecitb.org.uk

Registered Charity No. 264506

Version 2 April 2015
©ECITB 2015