Course Specification

National 3 Skills for Work Practical Experiences: Construction and Engineering Course Specification (C240 73)

Valid from August 2013

This edition, October 2018, version 3.0

Please refer to the note of changes at the end of this course specification for details of changes from previous version (where applicable).

Course outline

Course title: National 3 Skills for Work Practical Experiences: Construction and Engineering

SCQF credit points: (18 SCQF credit points)

Course code: C240 73

Mandatory units

The course comprises the following mandatory units:

J16C 73	*Practical Experiences in Construction*	6 SCQF credit points
J16D 73	*Practical Experiences in Engineering*	6 SCQF credit points
J16E 73	*Developing Employability Skills in Construction and Engineering*	6 SCQF credit points

Recommended entry

Entry is at the discretion of the centre.

Progression

This course or its units may provide progression to:

- National 4 courses and SCQF level 4 units in Construction or Engineering
- Scottish Vocational Qualifications in Construction and Engineering areas
- further education
- training or employment

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the support notes of this course specification.

There is automatic certification of Core Skill component Critical Thinking at SCQF level 3 in this course.

Links to National Occupational Standards

National Occupational Standards (NOS) are developed by the key employment sectors of the United Kingdom. These standards set the competences required for job roles within a particular employment sector.

This course has no direct links to NOS but provides a progression pathway to other courses which may have these links.

Further details are provided in the 'Rationale' section.

Equality and inclusion

This Course Arrangements Specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence. Further advice can be found on our website **www.sqa.org.uk/assessmentarrangements**.

Common rationale for Skills for Work Courses

Skills for Work Courses are designed to help learners to develop:

- skills and knowledge in a broad vocational area
- skills for learning, skills for life and skills for work
- Core Skills
- an understanding of the workplace
- positive attitudes to learning
- skills and attitudes for employability

A key feature of these courses is the emphasis on *experiential learning*. This means learning through practical experience and learning by reflecting on experience.

Learning through practical experience

Teaching/learning programmes should include some or all of the following:

- learning in real or simulated workplace settings
- learning through role play activities in vocational contexts
- carrying out case study work
- planning and carrying out practical tasks and assignments

Learning through reflecting at all stages of the experience

Teaching/learning programmes should include some or all of the following:

- preparing and planning for the experience
- taking stock throughout the experience, reviewing and adapting as necessary
- reflecting after the activity has been completed, evaluating and identifying learning points

The Skills for Work Courses are also designed to provide learners with opportunities for developing *Core Skills*, and *Skills for Learning, Skills for Life and Skills for Work* with a focus on enhancing skills and attitudes for *employability*.

Core Skills

The five Core Skills are:

- Communication
- Numeracy
- Information and Communication Technology (ICT)
- Problem Solving
- Working with Others

Employability

The skills and attitudes for employability, including self-employment, are outlined below:

- generic skills/attitudes valued by employers
- understanding of the workplace and the employee's responsibilities, for example, time-keeping, appearance, customer care, etc
- self-evaluation skills
- positive attitude to learning
- flexible approaches to solving problems
- adaptability and positive attitude to change
- confidence to set goals, reflect and learn from experience
- specific vocational skills/knowledge

Course specifications highlight the links to National Occupational Standards in the vocational area and identify progression opportunities.

Opportunities for developing these skills and attitudes are highlighted in each of the course and unit specifications. These opportunities include giving young people direct access to workplace experiences or, through partnership arrangements, providing different learning environments and experiences which simulate aspects of the workplace. These experiences might include visits, visiting speakers, role play and other practical activities.

A Curriculum for Excellence (Scottish Executive 2004) identifies aspirations for every young person. These are that they should become:

- successful learners
- confident individuals
- responsible citizens
- effective contributors

The learning environments, the focus on experiential learning and the opportunities to develop employability, Skills for Learning, Skills for Life, Skills for Work and Core Skills in these courses contribute to meeting these aspirations.

Course rationale for National 3 Skills for Work Practical Experiences: Construction and Engineering

All new and revised National Courses reflect Curriculum for Excellence values, purposes and principles. They offer flexibility, provide more time for learning, more focus on skills and applying learning, and scope for personalisation and choice.

In this course, and its component units, there will be an emphasis on skills development and the application of those skills. Assessment approaches will be proportionate, fit for purpose and will promote best practice, enabling learners to achieve the highest standards they can.

This Skills for Work course is also designed to provide learners with opportunities for developing Core Skills and Skills for Learning, Skills for Life and Skills for Work, with a strong focus on enhancing skills and attitudes for employability.

The National 3 Skills for Work Practical Experiences: Construction and Engineering course has been designed to provide a basis for progression into further education or training. In some cases learners may progress to employment at a semi-skilled level (assisting tradespeople) within the construction or engineering sector. The purpose of the course is to ensure that learners start to understand the range of employment opportunities and job roles within these broad sectors. The learners will also develop some of the basic generic practical skills and introductory knowledge and understanding necessary to enhance employment opportunities.

The primary target group for this course is school learners in S3 and above. It is anticipated that, for this group of learners, the course will rely on and build on existing partnerships between schools and colleges and employers (or other agencies). This is particularly important for allowing learners access to a range of different learning environments. Nevertheless, the National 3 Skills for Work Practical Experiences: Construction and Engineering course is designed at a level and scope such that it can be delivered in schools, if the school has suitable facilities and teaching expertise. The course is also suitable for adult learners who are seeking to enhance their employability and develop basic vocational skills in the construction and engineering sectors.

Purposes and aims of the course

The general aims of the National 3 Skills for Work Practical Experiences: Construction and Engineering course are to:

- widen participation in vocationally-related learning for 14–16 year olds
- allow learners to experience vocationally-related learning
- provide learners with a broad introduction to the range of employment opportunities and job roles in the construction and engineering vocational sectors
- encourage learners to develop a good work ethic, including time-keeping, a positive attitude and other relevant employability skills
- allow learners to understand the importance of team working in the construction and engineering sectors
- provide opportunities to develop a range of Core Skills in a realistic context
- encourage learners to take charge of their own learning and development
- provide a range of teaching, learning and assessment styles to motivate learners to achieve their full potential at this level
- facilitate progression to further education and/or training

In particular, the aims of this course are to:

- build learners' confidence in their ability to operate in a working environment
- encourage learners to consider a career in the construction and engineering industries
- develop an awareness of what employment opportunities there may be within construction and engineering in terms of the types and range of career options
- enable learners to develop and apply basic practical, technical and communication skills as a foundation for future learning and progression
- develop the learners' awareness of their individual strengths and weaknesses in relation to the requirements of construction and engineering, and to reflect on how this affects their employability potential
- give learners basic technical knowledge, skills and understanding associated with a limited range of craft skills in construction and engineering at this level
- encourage learners to apply their knowledge and understanding of construction and engineering by using basic skills of evaluation and problem-solving in a vocational context
- develop an awareness that health and safety issues are integral to the world of work generally and to construction and engineering in particular
- encourage learners to plan their work and review their progress
- encourage learners to develop a positive attitude to waste minimisation and environmental issues
- prepare learners for further learning opportunities, study and training for employment at a semi-skilled level (assisting trades people) in construction, engineering or related occupations

Information about typical learners who might do the course

The National 3 Skills for Work Practical Experiences: Construction and Engineering course requires no formal entrance qualifications although it would be expected that suitable learners would have a desire to explore the opportunities and skills that apply within these sectors.

This course supports progression into appropriate further education, training or employment at a semi-skilled level (assisting trades people). The course provides the basis for learners to gain an understanding of employability in construction and engineering occupational areas such as building, joinery, painting, mechanical, fabrication and electrical, and to use their studies to help them decide the career path they may wish to follow.

Therefore learners successfully completing this National 3 Skills for Work course may wish to:

- progress to a relevant National 4 Skills for Work course
- progress to a preparatory course in further education
- seek employment at a semi-skilled level

Embarking on this pathway may eventually lead to a craft apprenticeship in industry where learners might undertake a relevant SVQ.

Course structure and conditions of award

Summary of course content

This course has three mandatory 40-hour units. The practical units should be integrated with the *Developing Employability Skills in Construction and Engineering* (National 3) unit so that the range of career choices and employability skills related to specific skills in the construction and engineering industry are addressed.

Both the construction and engineering practical units, while focusing on basic craft skill areas, also address some basic generic skills related to:

- confidence
- technical communication
- materials
- measurement
- Core Skills

The employability skills identified as important in the construction and engineering sectors are:

- maintaining good time-keeping
- maintaining good attendance
- maintaining a tidy workplace
- following instructions
- seeking advice
- showing health and safety awareness
- wearing appropriate personal protective clothing
- preparing appropriately to carry out tasks
- checking own work, with support

Summary of unit content

Units are statements of standards for assessment and not programmes of learning and teaching. They can be delivered in a variety of ways; however Skills for Work units are designed to provide an experiential learning process.

Practical Experiences in Construction **(National 3)** **(1 credit)**
Learners will select and use the basic tools, equipment and materials associated with construction at an introductory level, leading to various practical activities and the manufacture of an artefact. The learner will learn basic construction terminology and skills.

Practical Experiences in Engineering **(National 3)** **(1 credit)**
Learners will select and use the basic tools, equipment and materials associated with engineering at an introductory level, leading to various practical activities and the manufacture of an artefact. The learner will learn basic engineering terminology and skills.

Developing Employability Skills in Construction and Engineering **(National 3)** **(1 credit)**
Learners will explore the range of employment opportunities, career paths and job roles in the construction and engineering industries, and develop work practices and attitudes that will enhance their employability skills. They will also regularly review and evaluate these skills.

Conditions of award

To achieve the award of National 3 Skills for Work Practical Experiences: Construction and Engineering, learners must achieve all the required units as outlined in the course outline. They will be assessed pass/fail within centres. Skills for Work Courses are not graded.

Assessment

Assessment objectives

Assessment across the units in this course will primarily test practical skills but will also address the range of employment opportunities and job roles, basic technical knowledge and understanding associated with those skills in Construction and Engineering at National 3. In particular, assessment will focus on:

- practical vocational skills
- skills for employment in a construction and engineering context

Unit assessment

The assessment of the units in this course will be as follows:

In the units which focus on the development of specific craft skills, the assessment involves a range of practical activities which will produce evidence for all the outcomes. The evidence will be confirmed by the use of an assessor checklist, which will cover:

- the appropriate use of tools, materials and equipment
- successful involvement in the completion of a range of practical activities
- the successful completion of an artefact
- use of simple drawings or specifications
- quality checking of their work by the learner
- adhering to the health and safety aspects of working in a workshop environment

The assessment of the *Developing Employability Skills in Construction and Engineering* (National 3) unit should be integrated with the assessment of the practical units and is based on the completion of a learner review sheet on four different occasions throughout the course. This review allows the learner to record development in employability skills in the context of different practical activities.

Evidence of knowledge and understanding of the range of roles in the sectors will be gathered through oral/written questioning throughout the course in the context of practical activities. This will be recorded in an assessor checklist.

Further details about unit assessment for this course can be found in the unit specifications and the assessment support pack (ASP) materials.

Exemplification of possible assessment approaches for these units will be provided in the ASP.

Quality assurance

All instruments of assessment used within this course should be internally verified, using the appropriate policy within the centre and the guidelines set by SQA.

External verification will be carried out by SQA to ensure that internal assessment is within the national guidelines for these qualifications.

Further information on internal and external verification can be found in *SQA's Guide to Assessment* **(www.sqa.org.uk/GuideToAssessment)**.

Development of skills for learning, skills for life and skills for work

It is expected that learners will develop broad, generic skills through this course. The skills that learners will be expected to improve on and develop through the course are based on SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work* and drawn from the main skills areas listed below. These must be built into the course where there are appropriate opportunities.

1 Literacy
1.1 Reading
1.2 Writing
1.3 Listening and talking

3 Health and Wellbeing
3.1 Personal learning
3.2 Emotional wellbeing

4 Employability, enterprise and citizenship
4.1 Employability
4.3 Working with others

5 Thinking Skills
5.1 Remembering
5.2 Understanding
5.3 Applying
5.4 Analysing and evaluating
5.5 Creating

Amplification of these skills is given in SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work*. The level of these skills will be appropriate to the level of the course.

Employability skills profile

Employability skills covered in this course are detailed in the table below. For the purposes of the table, the units are referred to as A, B and C as indicated.

Practical Experiences in Construction = A

Practical Experiences in Engineering = B

Developing Employability Skills in Construction and Engineering = C

Employability skill/attitude	Evidence
♦ Understanding roles and responsibilities in the workplace	C
♦ Maintaining good time-keeping	C
♦ Maintaining good attendance	C
♦ Maintaining a tidy workplace	A, B, C
♦ Following instructions	C
♦ Seeking advice	C
♦ Working co-operatively with others	C
♦ Showing health and safety awareness	A, B, C
♦ Wearing appropriate personal protective clothing	C
♦ Preparing appropriately to carry out tasks	A, B, C
♦ Using basic drawings and specifications, with support	A, B
♦ Checking own work, with support	C
♦ Identifying own strengths and weaknesses, with support	C
♦ Identifying learning points from practical experiences, with support	C
♦ Demonstrating positive attitudes to learning	C

Assessment evidence in all units:

A = Assessor observation checklists and learner reviews

B = Assessor observation checklists and learner reviews

C = Learner responses, assessor observation checklists and learner reviews

Course support notes

Course support notes are not mandatory; they provide advice and guidance on approaches to delivering and assessing the Skills for Work course. They are intended for teachers and lecturers who are delivering the course and its units.

Guidance on approaches to delivery and assessment for this course

Learning and teaching

The course has been designed to ensure that learners learn through practical experiences. The main focus in each of the skills units is on practical work. General vocational skills, such as selecting and maintaining tools and equipment, are integrated with practical activities within the units. As well as carrying out practical tasks, learners will also learn from brief lessons on health and safety and workshop protocol. Teaching and learning approaches will also include demonstrations of practical work by teachers/lecturers. Short lessons on specific aspects of industrial practice and the correct use of tools will prove invaluable at intervals throughout the learning experience. These may be followed by brief practical sessions in which the learners practise the skill emphasised by the demonstration. Given the practical nature of teaching/learning and assessment, centres should ensure that teaching blocks are of sufficient time to allow a meaningful experience for learners.

Reflecting on practical experiences and learning from them is an approach which is embedded in the course. Throughout the learning experiences, the emphasis should be on helping learners to develop an awareness of the employability skills and attitudes needed for the construction and engineering industries, for example, good time-keeping, co-operating with others, taking instructions, and a positive attitude to learning. Opportunities to develop these skills and attitudes arise naturally in the work of the course. Learners should be aware that these generic skills are just as important as the practical construction and engineering skills they are developing.

For example, it is important for workshop activities to be carried out within realistic timescales; learners will have opportunities to demonstrate good time-keeping in the context of these timescales. Learners will have to co-operate with others regarding shared workspace, tools and equipment. They will have to co-operate and communicate regarding the transfer of materials, tools and equipment safely around and across the workshop. Learners will be encouraged to develop a positive attitude to waste minimisation and environmental issues regarding the use of materials.

The work of the course will increase awareness that health and safety issues are important in the world of work generally and in construction and engineering in particular.

In carrying out construction and engineering activities, learners will learn that there are correct and incorrect ways to use tools and equipment. Teachers/lecturers should demonstrate good practice and correct procedures to learners, who will learn the importance to self and others of following instructions. Such positive experiences will help to encourage a positive attitude to learning.

Teaching and learning approaches should help to inform learners of realistic prospects in construction and engineering. They should become aware of steps to employment or further training. Through their experiences of the various practical skills in the course, they should become better equipped to make valid personal choices regarding careers and further study.

Teaching and learning approaches should encourage learners to take responsibility for their own learning and development. In the practical units of the course, learners need to carry out quality checks on their own work. This provides a good opportunity to motivate learners to take pride in their work. The *Developing Employability Skills in Construction and Engineering* (National 3) unit will allow learners to take responsibility for seeking feedback and identifying action points for improvement. This should help them to develop confidence in taking advice and in asking for direction and assistance where necessary.

In both practical units the building of learners' confidence through participation in and completion of practical assignments is an important element of the course.

Sequencing/integration of units

The course has three mandatory units which offer a range of different construction, engineering and employability experiences.

The *Developing Employability Skills in Construction and Engineering* (National 3) unit should span the course, allowing learners ample opportunity to develop and review employability skills and attitudes over a range of construction and engineering practical activities and over a reasonable period of time. The course should also allow learners to explore the range of employment opportunities and job roles related to the construction and engineering industries. There is no prescribed order of delivery for the Construction or Engineering units and it is at the centre's discretion whether the units are delivered sequentially or concurrently.

Guidance on approaches to delivery

Preparation for practical activities, visiting speakers, visits

Throughout the course, the need for correct preparation for practical activities should be stressed. However, such preparation should not take excessive time to complete. Teaching correct skills practice, effective use of tools and equipment and a positive view of health and safety should help to ensure that preparation for practical work is comprehensive yet concise.

Learners will require supervision during practical work — both on a skills level and for health and safety reasons. The learning environment should be designed to minimise risks and provide a safe context for carrying out activities, eg manual handling tasks.

It is recommended that each practical session be preceded by a 'tool box' talk on aspects of health and safety relevant to the work in hand. It is recommended that learners be given regular but short practice sessions in the correct use of the materials to be used in each session as well as coaching in the correct use of associated tools and equipment.

Centres are encouraged to establish links with local industry. Local companies may be happy to offer support, for example, in the form of visits. Visitors from industry will be able to give learners a realistic view of jobs and conditions in the construction and engineering industries.

Visits to local industry are often particularly useful because work in progress will be at different stages and learners can see various different trades working at the same time. Industrial visits should be carefully arranged, organised and authorised. It would be preferable for those responsible for such visits to have prior knowledge of the industry in question.

Due to current legislation it may not be possible for learners to visit construction or building sites. Centres should make themselves aware of current legislative restrictions on visiting construction sites particularly with 14 to 16 year olds.

Health and safety

Risk assessment and compliance with health and safety legislation is of paramount importance in this course. Due to the health and safety implications involved in working in construction and engineering, the units have been designed so that they can be taught and assessed in a workshop environment.

It is the centre's responsibility to produce risk assessments which set out the safe working/teaching and learning arrangements for teachers/lecturers, support staff and learners. Centres will need to be familiar with the requirements of the Health & Safety at Work Act, The Management of Health & Safety at Work Regulations, Control of Substances Hazardous to Health, Provision and Use of Work Equipment Regulations and other legislative requirements where risk assessments are required. (This list of statutes is not intended to be exhaustive, and centres must comply with all relevant current legislation.)

The course requires access to safe and suitably-equipped workshops or work areas to deliver and assess the vocational skill options. These workshops or work areas should be of an appropriate size and have sufficient tools, equipment and resources to deliver and assess the units for the number of learners in the class group. This may take the form of a combined workshop/project area divided into suitable work areas for each skill, or separate workshops. Storage areas for materials and personal protective equipment (PPE) should also be provided.

It is recognised that while some centres will have facilities and expertise available to deliver both of the practical units in this qualification, others will benefit from appropriate partnership arrangements to provide the learning environments and/or expertise necessary to deliver the course. Liaison and agreements regarding health and safety and safe systems of work would be a priority for partners involved.

Guidance on approaches to assessment

The assessment activities in this course make a particularly important contribution to learning, particularly the involvement of the learner in the review, evaluation and target setting processes which are required in the *Developing Employability Skills in Construction and Engineering* (National 3) unit*.* Delivery of this unit is integrated within the practical skills units and learners can readily gather evidence for assessment during their work in practical activities. Reviewing progress with generic employability skills and attitudes will take place in the practical context of work in the different practical activities. Learners will complete a minimum of four review sheets at different points during the various practical activities.

Within the practical units, learners will produce evidence as a natural part of the learning and teaching process. Learners will first learn and practise the correct techniques and methods for each of the skills they undertake. Assessment will take place at appropriate points throughout the course, allowing time for learners to make quality checks of their work. Assessment of the use of drawings, specifications and materials should also take place during the work in practical activities.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this course. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the evidence requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at **www.sqa.org.uk/e-assessment**.

Opportunities for developing Core Skills

Opportunities to develop aspects of Core Skills should be used where they arise naturally. For example, in order to carry out construction and engineering activities in a workshop environment learners will develop aspects of numeracy when making calculations and taking measurements. They will also have to use simple technical terms with tutors and fellow learners regarding skills practices, materials and tools, health and safety and working together in the workplace. Aspects of problem solving will arise in their participation in practical work.

Units in this course have the Critical Thinking component of Problem Solving at SCQF level 3 embedded in them.

General information for learners

This section will help you decide whether this is the course for you by explaining what the course is about, what you should know or be able to do before you start, what you will need to do during the course and opportunities for further learning and employment.

The course focuses on:

- The basic tools and materials associated with construction at a beginner's level.
- The basic tools and materials used in engineering at a beginner's level.
- The range of career paths in the construction and engineering industries and the employability skills required in these sectors.

You will learn how to:

- Use basic construction tools and materials and learn construction terminology.
- Manufacture an artefact using construction materials and the skills you have developed.
- Use basic engineering tools and materials and learn basic engineering terminology.
- Manufacture an artefact using engineering materials and the skills you have developed.
- Identify job roles and career options within the construction sector.
- Identify job roles and career options within the engineering industry.
- Demonstrate your relevant employability skills related to construction and engineering workplaces.
- Review your own performance in order to develop your employability skills.

You do not need to have any previous qualifications or experience.

After you finish this course, there may be opportunities to study other qualifications in this area, and/or further develop skills that will help in employment.

Administrative information

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History of changes to national course specification

Version	Description of change	Date
2.0	2013 — Course re-coded as part of CfE development programme but no change to course and unit content.	August 2013
3.0	Course specification moved to a new template. No change to content. Units re-coded to align with corresponding course 2 code	October 2018