

## National 5 Design and Manufacture

<b>Course code:</b>	C819 75
<b>Course assessment code:</b>	X819 75
<b>SCQF:</b>	level 5 (24 SCQF credit points)
<b>Valid from:</b>	session 2017–18

The course specification provides detailed information about the course and course assessment to ensure consistent and transparent assessment year on year. It describes the structure of the course and the course assessment in terms of the skills, knowledge and understanding that are assessed.

This document is for teachers and lecturers and contains all the mandatory information you need to deliver the course.

# Contents

<b>Course overview</b>	<b>1</b>
Course rationale	2
Purpose and aims	2
Who is this course for?	2
<b>Course content</b>	<b>3</b>
Skills, knowledge and understanding	3
Skills for learning, skills for life and skills for work	11
<b>Course assessment</b>	<b>12</b>
Course assessment structure: question paper	12
Course assessment structure: assignment — design	13
Course assessment structure: assignment — practical	15
Grading	17
<b>Equality and inclusion</b>	<b>18</b>
<b>Further information</b>	<b>19</b>

# Course overview

The course consists of 24 SCQF credit points which includes time for preparation for course assessment. The notional length of time for a candidate to complete the course is 160 hours.

The course assessment has three components.

Component	Marks	Duration
Component 1: question paper	80	1 hour and 45 minutes
Component 2: assignment — design	55	See course assessment section
Component 3: assignment — practical	45	See course assessment section

Recommended entry	Progression
<p>Entry to this course is at the discretion of the centre.</p> <p>Candidates should have achieved the fourth curriculum level or the National 4 Design and Manufacture course or equivalent qualifications and/or experience prior to starting this course.</p>	<ul style="list-style-type: none"><li>◆ other qualifications in design and manufacture or related areas</li><li>◆ further study, employment and/or training</li></ul>

## Conditions of award

The grade awarded is based on the total marks achieved across all course assessment components.

## Course rationale

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.

Every course provides opportunities for candidates to develop breadth, challenge and application. The focus and balance of assessment is tailored to each subject area.

The National 5 Design and Manufacture course allows candidates to develop knowledge and skills enabling them to appreciate, contribute and adapt to the diverse opportunities offered in manufacturing industries.

Candidates develop creative and practical skills by designing and making solutions to real problems. In addition, they gain an understanding of the impact of design and manufacture on everyday life.

The course encourages candidates to take a broad view of design and manufacture, through making decisions and taking responsibility for their own actions, generating and developing ideas, applying knowledge, and justifying decisions. These transferrable skills place candidates in a strong position regardless of the career path they choose.

## Purpose and aims

The main purpose of the course is to allow candidates to develop the skills and knowledge associated with designing and manufacturing.

The course enables candidates to develop:

- ◆ skills in designing and manufacturing models, prototypes and products
- ◆ knowledge and understanding of manufacturing processes and materials
- ◆ an understanding of the impact of design and manufacturing technologies on our environment and society

## Who is this course for?

This course is suitable for learners attracted by practical activities. It provides a foundation for those considering further study or a career in design, manufacturing, engineering, science, marketing, and related disciplines.

The course also offers a complementary practical experience for those studying subjects in the technologies and expressive arts.

# Course content

The course comprises two areas of study:

## Design

Candidates study the design process from brief to design proposal. This helps them develop skills in initiating, developing, articulating, and communicating design proposals. They gain an understanding of the design/make/test process and the importance of evaluating and resolving design proposals on an ongoing basis. Candidates also develop an understanding of the factors that influence the design of products.

## Manufacture

Candidates study the manufacture of prototypes and products. This helps them develop practical skills in the design/make/test process. They gain an appreciation of the properties and uses of materials, as well as a range of manufacturing processes and techniques, allowing them to evaluate and refine design and manufacturing solutions. Candidates also gain an understanding of commercial manufacture.

Integrating the two areas of study is fundamental to delivering the course successfully; it allows candidates to 'close the design loop' by manufacturing their design ideas.

## Skills, knowledge and understanding

### Skills, knowledge and understanding for the course

The following provides a broad overview of the subject skills, knowledge and understanding developed in the course:

- ◆ analysing information
- ◆ applying knowledge and understanding of:
  - idea-generation techniques
  - design factors
  - graphic techniques
  - modelling techniques
  - planning techniques
  - evaluation techniques
  - tools, materials, and processes
  - manufacturing techniques
- ◆ knowledge and understanding of commercial manufacture
- ◆ knowledge and understanding of the impact of a range of design and manufacturing technologies on our environment and society

## Skills, knowledge and understanding for the course assessment

The following provides details of skills, knowledge and understanding sampled in the course assessment:

Assignments		Question paper	
Skill	Candidates are required to demonstrate ability to:	Knowledge and understanding	Candidates are required to demonstrate knowledge and understanding of:
Analysing a brief	<ul style="list-style-type: none"> <li>◆ carry out research</li> <li>◆ incorporate research findings into a specification</li> </ul>	Analysis of a brief	<ul style="list-style-type: none"> <li>◆ gathering data</li> <li>◆ the key stages of the following research techniques:               <ul style="list-style-type: none"> <li>— questionnaires</li> <li>— user trips</li> </ul> </li> <li>◆ reasons for the selection of research techniques</li> <li>◆ the role of the product specification in the design process</li> </ul>
Generating ideas	<ul style="list-style-type: none"> <li>◆ generate ideas</li> </ul>	Idea-generation techniques	<ul style="list-style-type: none"> <li>◆ appropriate use of idea-generation techniques</li> <li>◆ the key stages of the following idea-generation techniques:               <ul style="list-style-type: none"> <li>— morphological analysis</li> <li>— brainstorming</li> </ul> </li> </ul>
Use of modelling	<ul style="list-style-type: none"> <li>◆ apply modelling techniques to develop a design proposal</li> </ul>	Modelling in the design process	<ul style="list-style-type: none"> <li>◆ the use of modelling in the design process to:               <ul style="list-style-type: none"> <li>— generate and explore</li> <li>— test and refine</li> <li>— communicate</li> </ul> </li> <li>◆ the advantages of using modelling in the design process</li> <li>◆ reasons for selection of types of models:               <ul style="list-style-type: none"> <li>— sketch</li> </ul> </li> </ul>

Assignments		Question paper	
Skill	Candidates are required to demonstrate ability to:	Knowledge and understanding	Candidates are required to demonstrate knowledge and understanding of:
			<ul style="list-style-type: none"> <li>— scale</li> <li>— block</li> <li>— computer-generated</li> </ul>
Use of graphics	<ul style="list-style-type: none"> <li>◆ use appropriate graphics to develop a design proposal</li> </ul>	Graphics in the design process	<ul style="list-style-type: none"> <li>◆ the use of graphics in the design process to: <ul style="list-style-type: none"> <li>— generate and explore</li> <li>— test and refine</li> <li>— communicate</li> </ul> </li> <li>◆ the advantages of using graphics in the design process</li> <li>◆ reasons for the selection of types of graphic techniques</li> </ul>
Developing ideas	<ul style="list-style-type: none"> <li>◆ explore ideas towards a proposal</li> <li>◆ refine ideas towards a proposal</li> <li>◆ apply knowledge and understanding of design</li> <li>◆ apply knowledge and understanding of materials and manufacture</li> </ul>	Function	<ul style="list-style-type: none"> <li>◆ the influence of function on the design of products</li> <li>◆ primary and secondary function</li> </ul>
		Performance	<ul style="list-style-type: none"> <li>◆ the influence of performance on the design of products</li> <li>◆ maintenance issues associated with products</li> <li>◆ the influence of a product's life expectancy on design, manufacture, and the environment</li> <li>◆ fitness-for-purpose of products</li> <li>◆ safety issues associated with products</li> </ul>
		Market	<ul style="list-style-type: none"> <li>◆ the influence of the target market on the design of products</li> <li>◆ marketing techniques to influence sales</li> <li>◆ the benefits of branding</li> <li>◆ technology push and market pull</li> </ul>

Assignments		Question paper	
Skill	Candidates are required to demonstrate ability to:	Knowledge and understanding	Candidates are required to demonstrate knowledge and understanding of:
		Aesthetics	<ul style="list-style-type: none"> <li>◆ the aesthetics of products</li> <li>◆ influences on the aesthetics of products</li> </ul>
		Ergonomics	<ul style="list-style-type: none"> <li>◆ the influence of ergonomics on the design of products:               <ul style="list-style-type: none"> <li>— safety</li> <li>— comfort</li> <li>— ease of use</li> </ul> </li> <li>◆ the use of anthropometric data</li> </ul>
		Uses of common materials	<ul style="list-style-type: none"> <li>◆ properties and appropriate use of:               <ul style="list-style-type: none"> <li>— hardwoods: beech, ash, mahogany, and oak</li> <li>— softwoods: red pine and spruce</li> <li>— manufactured boards: plywood, flexi-ply, MDF, chipboard, and hardboard</li> <li>— non-ferrous metals/alloys: aluminium, copper, and brass</li> <li>— ferrous metals/alloys: iron, mild steel, high-carbon steel, and stainless steel</li> <li>— thermoplastics: ABS, acrylic, polypropylene, and polystyrene</li> <li>— thermosetting plastics: urea formaldehyde and melamine formaldehyde</li> </ul> </li> </ul>
		People who influence design	<ul style="list-style-type: none"> <li>◆ the role of people who influence the design of products:               <ul style="list-style-type: none"> <li>— designers</li> <li>— manufacturers</li> <li>— marketing teams</li> <li>— consumers</li> </ul> </li> </ul>



Assignments		Question paper	
Skill	Candidates are required to demonstrate ability to:	Knowledge and understanding	Candidates are required to demonstrate knowledge and understanding of:
			<ul style="list-style-type: none"> <li>— retailers</li> </ul>
		Commercial manufacture	<ul style="list-style-type: none"> <li>◆ vacuum forming: uses, identifying features, and patterns</li> <li>◆ sand casting: uses, identifying features, and patterns</li> <li>◆ injection moulding: uses and identifying features</li> <li>◆ rotational moulding: uses and identifying features</li> <li>◆ die casting: uses and identifying features</li> <li>◆ computer-aided manufacture (CAM): benefits and drawbacks</li> <li>◆ laser cutter: uses, benefits, and drawbacks</li> <li>◆ 3D printer: uses, benefits, and drawbacks</li> <li>◆ the use of standard components and knock-down fittings</li> <li>◆ types of manufacturing systems: mass and one-off</li> </ul>
		Impact of design and manufacturing technologies	<ul style="list-style-type: none"> <li>◆ the impact of design and manufacturing technologies on society and the environment: <ul style="list-style-type: none"> <li>— supply of affordable and accessible products</li> <li>— changes to workforce</li> <li>— energy consumption</li> <li>— pollution</li> </ul> </li> <li>◆ methods to support sustainability</li> </ul>
Planning for manufacture	◆ produce a sequence of operations	Planning for manufacture	<ul style="list-style-type: none"> <li>◆ sequence of operations: <ul style="list-style-type: none"> <li>— steps and order</li> <li>— tools and machines</li> <li>— safety</li> </ul> </li> </ul>

Assignments		Question paper	
Skill	Candidates are required to demonstrate ability to:	Knowledge and understanding	Candidates are required to demonstrate knowledge and understanding of:
			<ul style="list-style-type: none"> <li>◆ working drawings</li> <li>◆ cutting lists</li> </ul>
Evaluating	<ul style="list-style-type: none"> <li>◆ evaluate the design proposal</li> </ul>	Evaluation of products	<ul style="list-style-type: none"> <li>◆ methods to evaluate products:               <ul style="list-style-type: none"> <li>— comparison to other products</li> <li>— user trials</li> <li>— comparison against specification</li> </ul> </li> <li>◆ questionnaires</li> </ul>
Measuring and marking out	<ul style="list-style-type: none"> <li>◆ use a range of measuring and marking-out tools</li> </ul>	Tools for measuring and marking out	<ul style="list-style-type: none"> <li>◆ the <b>use</b> of measuring and marking-out tools (<b>there is no requirement for candidates to describe the tool or its component parts</b>):               <ul style="list-style-type: none"> <li>— callipers: outside and odd-leg</li> <li>— rule</li> <li>— dividers</li> <li>— gauges: marking and mortise</li> <li>— centre punch</li> <li>— scribe</li> <li>— squares: try and engineer's</li> </ul> </li> </ul>
Using machine and hand tools	<ul style="list-style-type: none"> <li>◆ use a range of machine and hand tools</li> </ul>	Machine and hand tools for cutting and forming materials	<ul style="list-style-type: none"> <li>◆ the <b>use</b> of hand tools (<b>there is no requirement for candidates to describe the tools or their component parts</b>):               <ul style="list-style-type: none"> <li>— saws: coping, tenon, hacksaw, and junior hacksaw</li> <li>— chisels: mortise and bevel-edged</li> <li>— hammers: ball-pein, cross-pein, and claw</li> <li>— mallets: wooden and hide</li> <li>— planes: jack, smoothing, rebate, and plough</li> <li>— drill bits: twist, Forstner, countersink, and centre</li> </ul> </li> </ul>

Assignments		Question paper	
Skill	Candidates are required to demonstrate ability to:	Knowledge and understanding	Candidates are required to demonstrate knowledge and understanding of:
			<ul style="list-style-type: none"> <li>— files</li> <li>— hand router</li> <li>— pliers</li> <li>— pop-rivet gun</li> <li>— screwdrivers</li> <li>— tin snips</li> <li>— bending bars</li> <li>— taps and dies</li> <li>— nail punch</li> <li>— bradawl</li> <li>◆ the <b>use of machine tools (there is no requirement for candidates to describe the machines or their component parts):</b> <ul style="list-style-type: none"> <li>— sander: disc and belt</li> <li>— pillar drill: setting-up and depth stop</li> <li>— scroll/fret saw</li> <li>— centre lathe: setting-up, parallel and step turning, taper turning, drilling, and knurling</li> <li>— wood lathe: setting-up, preparing material, parting off, parallel turning, and finishing</li> <li>— mortise machine: setting-up and depth stop</li> <li>— fluidiser</li> <li>— oven</li> <li>— strip heater</li> </ul> </li> </ul>
Assembling components	<ul style="list-style-type: none"> <li>◆ prepare components for assembly</li> <li>◆ assemble components</li> </ul>	Assembling	<ul style="list-style-type: none"> <li>◆ the use of joining methods: <ul style="list-style-type: none"> <li>— adhesives</li> <li>— screws, nails, nuts and bolts</li> </ul> </li> </ul>

Assignments		Question paper	
Skill	Candidates are required to demonstrate ability to:	Knowledge and understanding	Candidates are required to demonstrate knowledge and understanding of:
			<ul style="list-style-type: none"> <li>— woodwork joints: mortise and tenon, lap, rub, halvings, dowel, rebate, and housings</li> <li>— pop-riveting</li> <li>— welding</li> <li>◆ the <b>use</b> of tools for holding and clamping (<b>there is no requirement for candidates to describe the tool or its component part</b>): <ul style="list-style-type: none"> <li>— vices and guards: machine, bench, hand, engineer's</li> <li>— G-clamp</li> <li>— sash cramps</li> </ul> </li> <li>◆ the use of formers and jigs</li> </ul>
Finishing	<ul style="list-style-type: none"> <li>◆ prepare surfaces for finishing</li> <li>◆ apply finish skilfully</li> </ul>	Surface finishing	<ul style="list-style-type: none"> <li>◆ surface finishing techniques: <ul style="list-style-type: none"> <li>— sanding/abrading</li> <li>— polishing</li> <li>— varnishing</li> <li>— oiling</li> <li>— staining</li> <li>— waxing</li> <li>— painting/lacquering</li> <li>— dip-coating</li> </ul> </li> </ul>

Skills, knowledge and understanding included in the course are appropriate to the SCQF level of the course. The SCQF level descriptors give further information on characteristics and expected performance at each SCQF level ([www.scqf.org.uk](http://www.scqf.org.uk)).

# Skills for learning, skills for life and skills for work

This course helps candidates to develop broad, generic skills. These skills are based on [SQA's Skills Framework: Skills for Learning, Skills for Life and Skills for Work](#) and draw from the following main skills areas:

## 2 Numeracy

2.2 Money, time and measurement

## 4 Employability, enterprise and citizenship

4.4 Enterprise

## 5 Thinking skills

5.2 Understanding

5.3 Applying

5.4 Analysing and evaluating

These skills must be built into the course where there are appropriate opportunities and the level should be appropriate to the level of the course.

Further information on building in skills for learning, skills for life and skills for work is given in the course support notes.

# Course assessment

Course assessment is based on the information provided in this document.

The course assessment meets the key purposes and aims of the course by addressing:

- ◆ breadth — drawing on knowledge and skills from across the course
- ◆ challenge — requiring greater depth or extension of knowledge and/or skills
- ◆ application — requiring application of knowledge and/or skills in practical or theoretical contexts as appropriate

This enables candidates to apply knowledge and skills developed through the course to:

- ◆ solve design problems in both practical and theoretical contexts
- ◆ answer questions, provide descriptions and explanations related to theoretical design and manufacture contexts
- ◆ produce a solution to an appropriately challenging design problem

## Course assessment structure: question paper

### Question paper

**80 marks**

The question paper has 80 marks out of a total of 180 marks available for the course assessment.

Candidates are required to provide reasoned responses to a range of question types which use command words such as: state, select, outline, identify, describe or explain.

The question paper assesses knowledge and understanding from the following areas of design and manufacturing:

- ◆ design (30 marks)
- ◆ workshop-based manufacture (30 marks)
- ◆ commercial manufacture (20 marks)

Full details of these areas can be found in the 'Skills, knowledge and understanding for the course assessment' table in this document.

The question paper has two sections.

**Section 1** has 60 marks. This section assesses design and workshop-based manufacture and consists of six or seven questions.

Question 1 has 30 marks. It assesses a range of materials, hand tools and machinery and is based on a workshop-crafted product. This question follows a similar format each year and requires reasoned responses to practical manufacturing tasks.

The remaining questions are worth 30 marks and assess design as specified in the ‘Skills, knowledge and understanding for the course’ table. The context of the questions is design work and products that focus on particular aspects of design.

**Section 2** has 20 marks. This section assesses commercial manufacture and consists of four or five questions.

The first question in this section assesses materials and commercial manufacturing processes. This question follows a similar format each year. Candidates identify, select and justify suitable materials and processes for the commercial manufacture of existing products.

The remaining questions assess the impact of commercial manufacture on society and the environment and other aspects of commercial manufacture, as specified in the ‘Skills, knowledge and understanding for the course’ table.

### **Setting, conducting and marking the question paper**

The question paper is set and marked by SQA, and conducted in centres under conditions specified for external examinations by SQA.

Candidates complete the paper in 1 hour and 45 minutes.

Specimen question papers for National 5 courses are published on SQA’s website. These illustrate the standard, structure and requirements of the question papers candidates sit. The specimen papers also include marking instructions.

## **Course assessment structure: assignment — design**

There are two linked assignments: design and practical.

### **Assignment — design**

**55 marks**

This assignment has 55 marks out of a total of 180 marks available for the course assessment. It assesses the application of design skills to develop a proposal to a set brief. The proposal is then manufactured as evidence for the assignment — practical.

The assignment — design provides an opportunity to demonstrate the skills as listed in the ‘Skills, knowledge and understanding for the course’ table in this document. Marks are awarded as follows:

- ◆ analysing a brief (8 marks)
- ◆ generating ideas (9 marks)
- ◆ developing ideas (20 marks)
- ◆ using models (6 marks)
- ◆ using graphics (6 marks)
- ◆ planning for manufacture (6 marks)

Candidates should be fully prepared before undertaking the assignment, ie they should have gained the design skills required and be aware of the requirements of the assessment.

## **Setting, conducting and marking the assignment — design**

The assignment is:

- ◆ set by SQA
- ◆ issued annually
- ◆ conducted under some supervision and control
- ◆ submitted to SQA for external marking

All marking is quality assured by SQA.

## **Assessment conditions**

### **Time**

Candidates generate evidence of their design skills by responding to a given brief. This evidence is produced over an extended period of time, allowing candidates to develop and refine their work before it is presented for assessment.

### **Supervision, control and authentication**

Under some supervision and control means:

- ◆ Candidates do not need to be directly supervised at all times.
- ◆ The use of resources, including the internet, is not tightly prescribed.
- ◆ The work an individual candidate submits for assessment is their own.
- ◆ Teachers and lecturers can provide reasonable assistance.

Teachers must exercise their professional responsibility in ensuring that evidence submitted by a candidate is the candidate's own work.

The teacher must retain the candidate's work between assessment sessions.

### **Resources**

There are no restrictions on the resources to which candidates may have access while producing their assignment.

### **Reasonable assistance**

Candidates must undertake the assessment independently. However, reasonable assistance may be provided prior to the formal assessment process taking place. The term 'reasonable assistance' is used to try to balance the need for support with the need to avoid giving too much assistance. If any candidates require more than what is deemed to be 'reasonable assistance', they may not be ready for assessment or it may be that they have been entered for the wrong level of qualification.



Candidates can seek clarification regarding the assessment task if they find it unclear. In this case, the clarification should normally be given to the whole class.

The teacher may give advice on the selection of an item to generate suitable evidence, ie it is appropriate for the teacher to remind candidates that their proposal from the assignment — design must allow them to demonstrate the skills required for the assignment — practical.

If a candidate is working on their assignment — design and is faced with more than one possible solution to a problem, then the teacher may explore options with them. The teacher and the candidate can discuss the pros and cons of each option, and the candidate can then decide on a solution based on the discussion.

Once candidates have submitted their completed assignment for assessment, it must not be changed by either the teacher or the candidate.

## **Evidence to be gathered**

### **Volume**

Candidates should present their work on a maximum of seven A3-sized sheets or equivalent. This includes a research pro forma sheet and a planning for manufacture pro forma sheet, which are issued annually with the assignment. Both sides of the research pro forma sheet may be used, all other sheets must be single-sided.

The above is given to indicate the volume of evidence required. No penalty will be applied.

## **Course assessment structure: assignment — practical**

There are two linked assignments: design and practical.

### **Assignment — practical**

**45 marks**

This assignment has 45 marks out of a total of 180 marks available for the course assessment. It assesses the application of practical skills to manufacture the proposal developed in the assignment — design.

The assignment — practical provides an opportunity to demonstrate the skills as listed in the 'Skills, knowledge and understanding for the course' table in this document. Marks are awarded as follows:

- ◆ measuring and marking out (9 marks)
- ◆ using hand and machine tools (18 marks)
- ◆ assembling components (5 marks)
- ◆ finishing (9 marks)
- ◆ evaluating (4 marks)

Candidates should be fully prepared before being assessed, ie they should have gained the practical skills required and be aware of the requirements of the assessment.

## **Setting, conducting and marking the assignment — practical**

The assignment is:

- ◆ set by SQA
- ◆ issued annually
- ◆ conducted under some supervision and control

Evidence is marked by centres and verified by SQA.

## **Assessment conditions**

### **Time**

Candidates generate evidence of their practical skills by manufacturing the proposal developed in their assignment. This evidence is produced over an extended period of time, allowing candidates to develop and refine their work before it is presented for assessment.

### **Supervision, control and authentication**

Under some supervision and control means:

- ◆ Candidates do not need to be directly supervised at all times.
- ◆ The use of resources, including the internet, is not tightly prescribed.
- ◆ The work an individual candidate submits for assessment is their own.
- ◆ Teachers and lecturers can provide reasonable assistance.

These conditions do not overrule normal health and safety conditions that apply to workshop activities.

Teachers must exercise their professional responsibility in ensuring that evidence submitted by a candidate is the candidate's own work.

The teacher must retain the candidate's work between assessment sessions.

### **Resources**

There are no restrictions on the resources to which candidates may have access while producing their work.

### **Reasonable assistance**

Candidates must undertake the assessment independently. However, reasonable assistance may be provided prior to the formal assessment process taking place. The term 'reasonable assistance' is used to try to balance the need for support with the need to avoid giving too much assistance. If any candidates require more than what is deemed to be 'reasonable

assistance', they may not be ready for assessment or it may be that they have been entered for the wrong level of qualification.

If a candidate is working on their assignment — practical and is faced with more than one possible solution to a problem, then the teacher may explore options with them. The teacher and the candidate can discuss the pros and cons of each option, and the candidate can then decide on a solution based on the discussion.

Once candidates have submitted their completed assignment for assessment, it must not be changed by either the teacher or the candidate.

## **Evidence to be gathered**

A practical solution and a written evaluation of the solution.

## **Volume**

There is no word count.

## **Grading**

A candidate's overall grade is determined by their performance across the course assessment. The course assessment is graded A–D on the basis of the total mark for all course assessment components.

### **Grade description for C**

For the award of grade C, candidates will typically have demonstrated successful performance in relation to the skills, knowledge and understanding for the course.

### **Grade description for A**

For the award of grade A, candidates will typically have demonstrated a consistently high level of performance in relation to the skills, knowledge and understanding for the course.

# Equality and inclusion

This course is designed to be as fair and as accessible as possible with no unnecessary barriers to learning or assessment.

For guidance on assessment arrangements for disabled candidates and/or those with additional support needs, please follow the link to the assessment arrangements web page: [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements).

# Further information

The following reference documents provide useful information and background.

- ◆ [National 5 Design and Manufacture subject page](#)
- ◆ [Assessment arrangements web page](#)
- ◆ [Building the Curriculum 3–5](#)
- ◆ [Design Principles for National Courses](#)
- ◆ [Guide to Assessment](#)
- ◆ [SCQF Framework and SCQF level descriptors](#)
- ◆ [SCQF Handbook](#)
- ◆ [SQA Skills Framework: Skills for Learning, Skills for Life and Skills for Work](#)
- ◆ [Coursework Authenticity: A Guide for Teachers and Lecturers](#)
- ◆ [Educational Research Reports](#)
- ◆ [SQA Guidelines on e-assessment for Schools](#)
- ◆ [SQA e-assessment web page](#)

# Administrative information

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## History of changes to course specification

Version	Description of change	Authorised by	Date

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Note: You are advised to check SQA's website to ensure you are using the most up-to-date version of the course specification.

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