

**Scottish Group Award Specifications**

SGA in:	<b>Construction: Building Services</b>		
Level:	<b>Higher</b>	Code:	<b>G5A9 12</b>



## Summary of requirements

### SGA in Construction: Building Services at Higher

#### National Courses and Units required\*

*2 mandatory National Courses (8 credits) at Higher:*  
Building Services  
Construction

*Details in specific section*

**plus**

*1 National Course (4 credits) at Higher from:*  
Building and Architectural Technology  
Civil Engineering  
Land Use (Built Environment)  
Quantity Surveying  
Structural Engineering

*Details in specific section*

**plus**

*1 mandatory National Unit (1 credit):*  
Mathematics 1 (Int 2)

*Details in specific section*

**plus**

*7 credits at minimum of Intermediate 2*

*Details in specific section*

**Total 20 credits**

#### Core skills required\*

*The above must include or cover:*  
5 core skills at Intermediate 2

*Details in specific section*

\*See Important Note on page 4.

# Rules for credit contribution

## Important Note\* Achievement above the minimum requirements

The specification shows the **minimum** requirements for this SGA. Where possible, centres may wish to encourage candidates to exceed this minimum. Candidates achieving above the minimum specification will have this achievement recorded on their Scottish Qualifications Certificate. For example the following can be achieved above the minimum requirement:

- Core Skills at levels above those specified
- more National Courses and Units at Higher instead of the credits at Intermediate 2
- National Course grades, eg grade A or B instead of grade C
- more than the required three National Courses, in which case each additional course completed counts as four credits

## Hierarchies

- courses and units can be substituted by those with the same title at a higher level, eg Mathematics 1 (Int 2) can be substituted by Mathematics 1 (H) (See Section C)

## Double counting

- courses and units with the same title at different levels cannot both contribute credits to the SGA, eg **either** Mathematics 1 (Int 2) **or** Mathematics 1 (H)
- same course achieved with different grades cannot both contribute credits to the SGA, eg **either** Higher Building Services at grade A **or** Higher Building Services at grade C

## National Course awards at Grade D

National Course awards at Grade D can contribute to the SGA in the following ways:

- in place of the specified mandatory or optional Higher Courses, a grade D at Advanced Higher in a Course of the same title can contribute 4 credits to the SGA

Note - The former compensatory course awards (fallbacks) can also contribute to the SGA:

- in place of the specified mandatory or optional Higher Courses, a compensatory award for a Course of the same title taken at Advanced Higher (ie awarded at Higher) can contribute 4 credits to the SGA.

## Specific section

A

This section specifies: mandatory courses, mandatory units, mandatory combinations of courses and/or units, mandatory core skill requirements and optional courses and units.

\*Mandatory unit of a course. †Optional unit of a course. All other units are free-standing National Units.  
[ ]Bracketed numbers indicate the former coding for these unrevised National Units.

Course/unit no	Course/unit title	Credits
<b>Two mandatory National Courses:</b>		
C023 12	Building Services (H)	4
C019 12	Construction (H)	4
<b>plus one National Course from:</b>		
C021 12	Building and Architectural Technology (H)	4
C022 12	Civil Engineering (H)	4
C020 12	Land Use (Built Environment) (H)	4
C01P 12	Quantity Surveying (H)	4
C01R 12	Structural Engineering (H)	4
<b>plus one mandatory National Unit:</b>		
D321 11	Mathematics 1 (Int 2)	1

**Total credits required: 13**

**plus any combination of courses, component units and free-standing units to gain seven credits**

(at minimum Int 2) from:

Course:

C021 12	Building and Architectural Technology (H)	4
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Component units of course:

D114 12	*Building Technology: Components and Finishes (H)	1
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D113 12	*Building Technology: Principles and Processes (H)	2
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Course:

C022 12	Civil Engineering (H)	4
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Component units of course:

D117 12	*Civil Engineering Practice (H)	1
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D118 12	*Civil Engineering Technology (H)	1
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D119 12	*Structural Mechanics and Design 1 (H)	1
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Course:

C020 12	Land Use (Built Environment) (H)	4
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Component units of course:

D112 12	*Land Use: Economics (H)	1
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D110 12	*Land Use: Mapping (H)	1
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D111 12	*Land Use: Planning (H)	1
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Course/unit no	Course/unit title	Credits
Course:		
C01P 12	Quantity Surveying (H)	4
Component units of course:		
D22T 12	*Building Contracts and Tendering (H)	1
D911 12	*Building Estimating (H)	1
D22S 12	*Construction, Measurement and Description (H)	1
Course:		
C01R 12	Structural Engineering (H)	4
Component units of course:		
D22V 12	*Structural Design and Detailing (H)	1
D22W 12	*Structural Drawing and Detailing (H)	1
D925 12	*Structural Mechanics and Design 2 (H)	1
Free-standing National Units:		
E8MP 12	Air Conditioning: Plant and Ductwork (H) [75068]	1
D985 12	Computer Aided Draughting (CAD) (H)	1
E8M8 12	Construction Fundamentals 1 (H) [75013]	1
E8MH 12	Heating and Ventilating: Building Heat Requirements (H) [75062]	1
E8MM 12	Heating and Ventilating: Fuels and Combustion (H) [75066]	1
E8ML 12	Heating and Process Pipe Sizing (H) [75065]	1
E8MJ 12	Heating and Ventilating: Services Provision (H) [75063]	1
E7RE 12	Introduction to Thermofluids (H) [64008]	1
E8MN 11	Air Conditioning Psychometry (Int 2) [75067]	1
E8MX 11	Building Services: Mechanical Systems (Int 2) [75151]	0.5
EA8J 11	Electrical Installation: Site Procedure (Int 2) [4110302]	0.5
E8N5 11	Engineering Services Drawing 1 (Int 2) [75235]	1
E8N6 11	Engineering Services Drawing 2 (Int 2) [75236]	1
E8MK 11	Heating and Ventilating: Steam Systems (Int 2) [75064]	0.5
E9MD 11	Materials and Jointing Methods (Electrical) (Int 2) [4110060]	0.5
EA05 11	Mechanical Services Technology: Ventilation and Air Conditioning (Int 2) [4290061]	0.5
E9CG 11	Selecting a Cable Size (Int 2) [94105]	0.5
D36H 11	Work Experience (Int 2)	1
D01B 11	Communication (Int 2)	1
D01C 11	Numeracy (Int 2)	1
D01D 11	Information Technology (Int 2)	1
D01E 11	Problem Solving (Int 2)	1
D01F 11	Working with Others (Int 2)	1

Specific SVQs can contribute credits to this SGA. (See Section D)

**Total credits required: 7**

**20 credits**

## **\*\* Core skills requirement**

Communication at Intermediate 2

Numeracy at Intermediate 2

Information Technology at Intermediate 2

Problem Solving at Intermediate 2

Working with Others at Intermediate 2

\*\* See Section B for core skills details.

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## Core skills

B

To achieve this SGA, all candidates **must achieve** the following core skills:

Core skill	Level
Communication	Intermediate 2
Numeracy	Intermediate 2
Information Technology	Intermediate 2
Problem Solving	Intermediate 2
Working with Others	Intermediate 2

One or more core skills units in this SGA may be automatically certificated through mandatory courses and units. Where this is the case, the corresponding core skill unit in this section cannot be counted towards the SGA.

Candidates can achieve core skills:

- through Standard Grades or other units which give automatic certification of core skills, eg a candidate who has completed Standard Grade English at Credit Level is given automatic certification of Communication at Intermediate 2
- by selecting from the group award units and courses which give automatic certification of core skills, eg the optional unit Work Experience (Int 2) gives automatic certification of Problem Solving and Working with Others at Intermediate 2
- by doing dedicated core skills units – these units can contribute credits to the SGA and should be achieved through integration with appropriate subject specialist units. However, if the candidate wishes, the unit credits need not contribute to the SGA.

Candidates' current level of achievement in core skills is shown on the Scottish Qualifications Certificate in the form of a profile. This shows achievement against each of the core skills *components*. Where a core skill has more than one component, the candidate needs to achieve each component at the level specified for the SGA. For example, if an SGA requires Problem Solving at Intermediate 2, a candidate whose profile shows Critical Thinking and Planning and Organising at Intermediate 2 and Reviewing and Evaluating at Intermediate 1 would not meet the requirement and would have to improve in Reviewing and Evaluating.

Details of all courses which give automatic certification of core skills is published in the *Catalogue of Core Skills in National Qualifications* (SQA, 2001/2002).



## Hierarchical sequences

C

The SQA numbering system for qualifications consists of a 4 + 2 reference code.

The qualifications in a hierarchical sequence have the same title and are available at more than one level. They are identified by their reference code having the same first four digits, eg D36H in the example below. The last two digits are unique to each level of qualification, eg 12 equates to Higher, 11 equates to Intermediate 2.

### Units

The following is an example of a hierarchical sequence of units:

D36H 10	Work Experience (Int 1)
D36H 11	Work Experience (Int 2)
D36H 12	Work Experience (H)

Where units which are part of hierarchical sequences are specified, candidates who achieve a unit at a higher level than the one specified can use the upper level unit to count as credit towards the group award. For example, Work Experience (H) can be counted instead of Work Experience (Int 2).

Candidates can only use one of these units to count as credit towards the group award.

In the case of unrevised National Certificate Modules, ie units which retain their original number, there are hierarchies where the title is the same and the number is different. Details of these exceptions will be published in a separate document. The pattern for these hierarchies is the same as that previously established for GSVQs.

There are also some hierarchies where the titles and numbers of the units at different levels are different. In this specification, if there are two units at different levels with heavily overlapping content, only one of these units should be used to count as credit towards the group award. Details of these exceptions will be published in a separate document.

### Courses

The following is an example of a hierarchical sequence of courses:

C021 12	Building and Architectural Technology (H)
C021 13	Building and Architectural Technology (AH)

In the SGA specification, where courses which belong to hierarchical sequences are specified, candidates who achieve a course at a higher level than the one specified can use the upper level course to count as credit towards the group award. For example, Building and Architectural Technology (AH) can be counted instead of Building and Architectural Technology (H).

Candidates can only use one of these courses to count as credit towards the group award - a maximum of 4 credits.





Relevant Scottish Vocational Qualifications (SVQs) at the appropriate level can each contribute up to eight credits to an SGA.

SVQs at Level 3 contribute credits at Higher.

SVQs at Level 2 contribute credits at Intermediate 2.

SVQs can each contribute a maximum of eight credits.

In this particular SGA, there are currently no relevant SVQs within their accreditation period. Candidates wishing to use an SVQ to contribute to this SGA should contact the Scottish Qualifications Authority for advice.

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