

National Unit Specification: general information

UNIT Fossils and Stratigraphy (Higher)

NUMBER D251 12

COURSE Geology (H)

SUMMARY

This unit seeks to develop knowledge and understanding relating to fossils and stratigraphy. It will also include an understanding of the principles of ecology as they are applied to the study of ancient environments.

OUTCOMES

- 1 Demonstrate knowledge and understanding related to fossils and stratigraphy
- 2 Solve problems related to fossils and stratigraphy.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained Intermediate 2 Geology or its component units. It would, however, be possible for able students to enter the course with no prior knowledge of geology. Previous experience of a science or Geography at Credit or Higher Level would be advantageous.

CREDIT VALUE

0.5 credit at Higher.

Administrative Information

Superclass: RD

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National Unit Specification: general information (cont)

UNIT Fossils and Stratigraphy (Higher)

CORE SKILLS

This unit gives automatic certification of the following:

Complete core skills for the unit	None	
Additional core skills components for the unit	Critical Thinking	Higher
	Using Graphical Information	Intermediate2

Additional information about core skills is published in the *Catalogue of Core Skills in National Qualifications* (SQA, 2001)

National Unit Specification: statement of standards

UNIT Fossils and Stratigraphy (Higher)

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the Scottish Qualifications Authority.

OUTCOME 1

Demonstrate knowledge and understanding related to fossils and stratigraphy.

Performance criteria

- (a) The principles of stratigraphy are correctly explained with particular reference to the geological history of the local area
- (b) The measurement of geological time is correctly explained with reference to relative and radiometric timescales
- (c) The value of fossils is correctly explained with reference to relative age dating, correlation, evolution and palaeoecology.

Evidence requirements

Evidence is produced from a closed book test which demonstrates successful achievement of all of the above performance criteria.

OUTCOME 2

Solve problems related to fossils and stratigraphy.

Performance criteria

- (a) Relevant information is selected and presented in an appropriate format
- (b) Information is accurately processed using calculations where appropriate
- (c) Valid conclusions are drawn and explanations given are supported by evidence
- (d) Predictions and generalisations are made based on the available evidence.

Evidence requirements

Evidence is produced from a closed book test which demonstrates successful achievement of all of the above performance criteria, including the interpretation and communication of graphical information at the appropriate level. With reference to PCs (c) and (d), the candidate's answers must include valid conclusions and explanations based on an evaluation of supporting evidence.

National Unit Specification: support notes

UNIT Fossils and Stratigraphy (Higher)

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 20 hours.

Guidance on the content and context for this unit, and on learning and teaching approaches, is given in the table in the Content section of the course details.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

This unit will be assessed by means of an end-of-unit assessment which integrates Outcomes 1 and 2. The mark allocation for each performance criterion should be approximately as follows. (Note that the numbers given express a ratio of marks allocated. Candidates would not be expected to undertake test items with the actual mark allocations shown.)

Outcome 1	(knowledge and understanding)	60%
PC		
(a)	On principles of stratigraphy	(30)
(b)	On geological time	(15)
(c)	On fossils.	(15)
Outcome 2	(problem solving)	40%
PC		
(a)	Selecting and presenting information	(5)
(b)	Processing information	(10)
(c)	Drawing conclusions and giving explanations	(15)
(d)	Making valid predictions and generalisations.	(10)

Test items should be constructed to allow candidates to generate evidence relating to the performance criteria as follows:

- (a) Selecting and presenting information
 - sources of information include text, charts, graphs, diagrams
 - formats of presentation include written responses, tables graphs, diagrams
- (b) Calculations include percentages, averages and ratios. Significant figures, rounding and units should be used appropriately
- (c) Conclusions drawn should include some justification and explanations should be supported by evidence
- (d) From given situations, candidates should be able to predict and generalise eg by expressing a general relationship between the shape of shells and their environment.

SPECIAL NEEDS

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (SQA, 2001).