



National Unit Specification: general information

UNIT Christianity: Belief and Science (Higher)

CODE F59Y 12

COURSE Religious, Moral and Philosophical Studies (Higher)

SUMMARY

This Unit is designed to offer progression for candidates who have studied core Religious and Moral Education, the Intermediate 2 Religious, Moral and Philosophical Studies Course or Units, or Standard Grade Religious Studies at Credit level. Candidates develop the knowledge and skills necessary to understand contemporary relationships between Christian belief and scientific theory. They investigate the nature of Christian revelation and scientific enquiry and two specific questions about human origins. The questions are: What is the origin of the universe? What is the origin of human life?

Candidates will develop knowledge and understanding of the nature of Christian revelation and scientific enquiry and answers to the specific questions above which arise from Christian revelation and scientific enquiry. The skills of analysis and evaluation will be developed by investigating interpretations of these answers which suggest conflict or compatibility between Christian belief and scientific theory. While investigating these issues candidates have frequent opportunities to reflect upon their own beliefs and those of others. This Unit therefore makes a significant contribution to personal and social development.

Specific questions about human origins are addressed in this Unit. However, the skills and understanding which candidates develop can be applied to a wide range of philosophical and theological issues. This prepares candidates for a more in-depth study of Philosophy or the Philosophy of Religion at Advanced Higher level and in Further or Higher Education Institutions. It also prepares candidates for entry to any field of employment where the ability to reach sound conclusions, after an investigation of complex issues, is required.

OUTCOMES

- 1 Demonstrate knowledge and understanding of the nature of Christian revelation and scientific enquiry.
- 2 Analyse interpretations of answers to important questions about origins.
- 3 Evaluate interpretations of answers to important questions about origins.

Administrative Information

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RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

- ◆ Standard Grade Religious Studies at Grade 1 or 2
- ◆ Intermediate 2 Religious, Moral and Philosophical Studies
- ◆ a pass in a Religious, Moral and Philosophical Studies Intermediate 2 Unit
- ◆ a social subject at Intermediate 2

CREDIT VALUE

1 credit at Higher (6 SCQF credit points at SCQF level 6*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

CORE SKILLS

There is no automatic certification of Core Skills or Core Skills components in this Unit.

National Unit Specification: statement of standards

UNIT Christianity: Belief and Science (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 SQA.

OUTCOME 1

Demonstrate knowledge and understanding of the nature of Christian revelation and scientific enquiry

Performance Criteria

- (a) Describe the nature and importance of revelation in the Christian tradition.
- (b) Describe the methods of scientific enquiry.
- (c) Describe answers to specific questions about origins which arise from Christian revelation and scientific enquiry.

OUTCOME 2

Analyse interpretations of answers to important questions about origins.

Performance Criteria

- (a) Explain interpretations of specific answers which suggest a conflict between Christian belief and scientific theory.
- (b) Explain interpretations of these answers which suggest that Christian belief and scientific theory are compatible.
- (c) Explain the reasons for differences between these interpretations.

OUTCOME 3

Evaluate interpretations of answers to important questions about origins.

Performance Criteria

- (a) Explain perceived strengths and weaknesses of interpretations which suggest conflict between Christian belief and scientific theory.
- (b) Explain perceived strengths and weaknesses of interpretations which suggest that Christian belief and scientific theory are compatible.
- (c) Assess the implications of these interpretations for human understanding of the purpose and goals of life.
- (d) Give reasons to support the assessment made.

National Unit Specification: statement of standards (cont)

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EVIDENCE REQUIREMENTS FOR THIS UNIT

Details of Content and Context for this Unit are provided in the appendix.

To demonstrate satisfactory attainment of all the Outcomes and Performance Criteria candidates must produce written and/or recorded oral evidence in relation to the nature of Christian revelation and scientific enquiry and **one** question about origins. The evidence should be in the form of a closed-book, supervised test with a time limit of one hour.

The Unit should be assessed by a one-part test which may contain a stimulus and a total of 3-5 structured questions. The questions should sample across the mandatory content in relation to Area 1 and one of the remaining mandatory Areas. The questions should allow the candidate to generate answers which demonstrate competence in all Outcomes and Performance Criteria. 60% of the marks should be awarded for knowledge and understanding in line with Outcome 1. The remaining 40% of the marks available should be awarded for Analysis and Evaluation in line with Outcomes 2 and 3.

If re-assessment is required, it should sample across a different range of mandatory content.

The standard to be applied and the breadth of coverage are illustrated in the National Assessment Bank items available for this Unit. If a centre wishes to design its own assessments for this Unit they should be of a comparable standard.

National Unit Specification: support notes

UNIT Christianity: Belief and Science (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 40 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

In this Unit candidates develop the knowledge and skills necessary to investigate contemporary relationships between Christian belief and scientific theory. These relationships are explored by investigating the nature of Christian revelation and scientific enquiry. Candidates then study the answers to two important questions about origins. One answer to each question arises from revelation in the Christian tradition; one answer to each question arises from scientific enquiry. The relevant questions about origins are: What is the origin of the universe? What is the origin of human life?

All content for this Unit and all areas of study are mandatory. Questions in Unit and Course assessment will sample across the Unit content. It is therefore of vital importance that candidates cover all mandatory aspects of the Unit. A detailed outline of the mandatory areas of study and content can be found in the appendix at the end of these support notes.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

There is no choice of areas of study in this Unit. Centres are therefore strongly advised to make sure that they are familiar with all aspects of the Unit Specification and mandatory content when planning the delivery of this Unit.

Specific Christian teachings, the ideas of specific Christian theologians, philosophers and scientists should be used to illustrate the ideas which are studied. Named individuals or texts are not prescribed. Centres are therefore free to select specific teachings and the ideas of specific writers in light of the resources available and the range of candidates studying the Unit. A list of appropriate writers appears below:

Approaches	Appropriate writers
<i>Scientific Inquiry</i>	A J Ayer, Thomas Kuhn, Karl Popper
<i>Biblical Literalism and Creationism</i>	William A Dembski, Duane T Gish, Russell Humphreys, Phillip Johnston, Roy E Peacock
<i>Scientific conflict with revelation</i>	P W Atkins, Richard Dawkins, Stephen Hawking, Jacques Monod, E O Wilson
<i>Non-literalist views of Revelation and Compatibility</i>	Teilhard de Chardin, Paul Davies, Sallie McFague, Mary Midgley, Nancey Murphy, Arthur Peacock, John Polkinghorne, Karl Rahner, Keith Ward, A N Whitehead

It is not recommended that candidates study entire texts by denominational authorities, named theologians or individual writers. Extracts from the writings of appropriate Christian theologians, philosophers and scientists and summaries of their ideas can be found in a range of textbooks on Theology and Science. The issue of the relationship between religious beliefs and scientific theories is a frequent subject of contemporary debate. New discoveries and new approaches will arise. The internet, newspaper/magazine articles, television/radio discussion programmes and public debates will also provide a rich source of information.

National Unit Specification: support notes (cont)

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All areas of study and some of the mandatory content for this Unit are also covered in the Intermediate 2 *Christianity: Belief and Science* Unit. If a centre makes the judgement that an Intermediate 2 Unit would be more appropriate for a particular candidate, this candidate can be assessed at that level without difficulty. However, it should be noted that there are differences in the skills required at each level and in the amount of detail in the mandatory content.

Candidates who have already studied the Intermediate 2 *Christianity: Belief and Science* Unit or Existence of God Unit will have significant opportunities to build on and develop the knowledge and skills they have already acquired.

When candidates study this Unit as part of the Higher Course, there are significant opportunities to integrate knowledge and/or skills in the remaining two Units of the Course.

Guidance on setting the climate for effective learning and teaching, and a variety of classroom activities, can be found in the 'Approaches to Learning and Teaching' section of the Course details.

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

Throughout this Unit candidates will have the opportunity to develop the skills of Critical Thinking and Written Communication. Throughout the Unit and in assessment candidates critically assess various viewpoints on philosophical and scientific issues and will express their opinions and viewpoints in both Written and Oral Communication.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by information and communications technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

Details of the appropriate conditions for assessment of competence in this Unit are outlined in the 'Evidence Requirements for the Unit' in the statement of standards. Centres must make sure that all Unit assessment is carried out under the stated conditions.

The timing of assessment is at the discretion of the centre. However, candidates will develop their knowledge and skills during their study of all mandatory content. This would suggest that appropriate instruments of assessment may best be attempted as an end of Unit test.

National Unit Specification: support notes (cont)

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An appropriate instrument of assessment is a one-part test which may contain a stimulus and a total of 3–5 structured questions. The questions should sample across the mandatory content in relation to Area 1 and one of the remaining mandatory Areas. The structured questions should allow candidates to generate answers which demonstrate competence in all Outcomes and Performance Criteria. 60% of the marks should be awarded for knowledge and understanding in line with Outcome 1. The remaining 40% of the marks available should be awarded for Analysis and Evaluation in line with Outcomes 2 and 3.

Unit assessment is holistic in nature. When reassessment is required individual candidates should therefore attempt a new instrument of assessment in its entirety to ensure that a different range of mandatory content is sampled.

Appropriate instruments of assessment and marking schemes are contained in the National Assessment Bank packs.

CANDIDATES WITH DISABILITIES AND/OR ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

National Unit Specification: statement of standards (cont) — Appendix

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NB: This appendix is within the statement of standards, ie the mandatory requirements of the Unit.

In this Unit candidates develop the knowledge and skills necessary to investigate contemporary relationships between Christian belief and scientific theory. These relationships are explored by investigating the nature of revelation in the Christian tradition and scientific enquiry. Candidates then study the answers to two important questions about origins. One answer to each question arises from revelation in Christian scriptures; one answer to each question arises from scientific enquiry. The relevant questions about origins are: What is the origin of the universe? What is the origin of human life?

The areas of study for this Unit are outlined below and **all candidates must study all three areas:**

Area 1 — Sources of human understanding

- ◆ Revelation in the Christian tradition is an important source for understanding both the origins of the universe and human origins
- ◆ Scientific enquiry is an important source for understanding both the origins of the universe and human origins

Area 2 — Question: What is the origin of the universe?

- ◆ The universe was created by God
- ◆ The universe originated from the Big Bang

Area 3 — Question: What is the origin of human life?

- ◆ Human life is created by God
- ◆ Human life has emerged as a result of the process of evolution

Care must be taken to ensure candidates understand that revelation and scientific enquiry - and the answers to the questions about human origins which they study - are not necessarily competing alternatives. Some Christians may reject answers to questions about origins which arise from scientific enquiry. Some scientists may reject answers which arise from Christian revelation. Equally, some Christians today see no conflict between their beliefs and scientific theories and some scientists have strongly held Christian beliefs. An individual's rejection, or acceptance, of the relevant answers to each question will depend on the relative importance he/she places on revelation and scientific enquiry as sources of understanding. For this reason, candidates must analyse and evaluate a range of interpretations of the relevant answers when investigating each question. Some interpretations suggest that there is a conflict between Christian belief and scientific theory: some interpretations suggest that dialogue is possible and that Christian belief and scientific theory are compatible.

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The following range of interpretations must be covered when investigating each question: one interpretation which results in a conflict between Christian belief and widely accepted scientific theory; one interpretation which results in the questioning of Christian belief in the light of scientific theory; one interpretation which arises from dialogue and an acceptance of the compatibility between Christian belief and scientific theory. A detailed guide to the relevant interpretations and mandatory content can be found in the tables at the end of this appendix. Candidates will be expected to have studied relevant interpretations. **Centres must therefore ensure that all aspects of the mandatory content are covered during learning and teaching.**

Specific Christian theologians, philosophers and scientists should be used to illustrate each interpretation but individual writers and texts are not prescribed. Centres are therefore free to select appropriate writers in light of the resources available and the range of candidates studying the Unit. Care must be taken to ensure that the writers chosen illustrate all aspects of the mandatory content. Detailed guidance on appropriate writers appears in the support notes for this Unit.

It is essential for candidates to understand that different interpretations of the answers to the questions they study can lead to different conclusions about the purpose and goals of human life. Interpretations which include belief in God suggest that life has a spiritual purpose and goal beyond physical existence: interpretations which exclude this possibility suggest that the purpose and goals of life lie only in the physical world. For this reason, candidates must assess the implications of each interpretation for our understanding of the purpose and goals of human life as part of evaluation.

Mandatory areas and content

A summary of all Mandatory Areas of Study and Content appears below:

Area 1	Sources of Human Understanding	Mandatory content
	<p>Revelation in the Christian tradition is an important source of human understanding</p> <p>Scientific enquiry is an important source of human understanding</p>	<ul style="list-style-type: none"> ◆ the nature and importance of revelation in the Christian tradition, including strengths and limitations ◆ scientific method, including strengths and limitations
Possible Relationships	<p>Relationship 1: the questioning of scientific enquiry as a reliable source of human understanding</p> <p>Relationship 2: the questioning of revelation as a reliable source of human understanding</p> <p>Relationship 3: the acceptance of both revelation and scientific enquiry as reliable sources of human understanding</p>	<ul style="list-style-type: none"> ◆ illustrated by Christian interpretations in Areas 2 and 3 ◆ illustrated by scientific materialist interpretations in Areas 2 and 3 ◆ illustrated by interpretations which suggest compatibility between Christian belief and scientific theory in Areas 2 and 3

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Area 2	Question 1: What is the origin of the universe?	Mandatory content
Relevant answers	<p>The Universe was created by God</p> <p>The universe originated from the Big Bang</p>	<ul style="list-style-type: none"> ◆ the creation of the universe in Genesis 1: literal or symbolic? ◆ God as First Cause: Aquinas' Cosmological Argument ◆ The Big Bang theory ◆ evidence supporting the Big Bang theory
Interpretation 1 Interpretation which results in the rejection of scientific theory	The Big Bang theory contradicts revelation	<ul style="list-style-type: none"> ◆ Literalist: scriptural accounts of the creation of the universe are factual ◆ The Big Bang theory is rejected because it contradicts literal readings of scripture
Interpretation 2 Interpretation which results in the rejection of Christian belief	Revelation contradicts the Big Bang theory	<ul style="list-style-type: none"> ◆ Scientific materialism: the Big Bang theory removes the need for God ◆ the existence of the universe is simply a fact which needs only a scientific explanation
Interpretation 3 Interpretation which suggests compatibility between Christian belief and scientific theory	Revelation and the Big Bang theory both contribute to a full understanding of the origins of the universe	<ul style="list-style-type: none"> ◆ there is no contradiction in believing that the Big Bang was the mechanism God used to create the universe ◆ The Big Bang theory can help to explain the physical origins of the universe ◆ Christian revelation answers important questions about spiritual origins and goals

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Area 3	What is the origin of human life?	Mandatory content
Relevant answers	<p>Human life is created by God</p> <p>Human life has emerged as a result of the process of evolution</p>	<ul style="list-style-type: none"> ◆ the creation of human beings in Genesis 1 and 2: literal or symbolic? ◆ God as Designer: Paley’s Teleological Argument ◆ the theory of evolution ◆ evidence supporting evolutionary theory
Interpretation 1 Interpretation which results in the rejection of scientific theory	Evolutionary theory contradicts revelation	<ul style="list-style-type: none"> ◆ Literalist: scriptural accounts of the creation of human life are factual ◆ the theory of evolution is rejected because it contradicts literal readings of scripture
Interpretation 2 Interpretation which results in the rejection of Christian belief	Revelation contradicts evolutionary theory	<ul style="list-style-type: none"> ◆ scientific materialism: the theory of evolution removes the need for God ◆ evolutionary theory fully explains the origins of human life
Interpretation 3 Interpretation which suggests compatibility between Christian belief and scientific theory	Revelation and the theory of evolution both contribute to a full understanding of the origins of human life	<ul style="list-style-type: none"> ◆ there is no contradiction in believing that God created human life using the mechanism of evolution ◆ evolutionary theory can help to explain the physical origins of human life ◆ revelation answers important questions about the purpose and goals of life