



Investigating Physics (Advanced Higher) Unit

SCQF: level 7 (4 SCQF credit points)

Unit code: H7XG 77

Unit outline

The general aim of this Unit is to develop skills of scientific inquiry, investigation, analytical thinking, independent working and knowledge and understanding of investigating physics.

The Unit offers opportunities for independent learning set within the context of experimental physics. Learners will develop skills of planning, experimental design and analysis of recorded data.

There is no specified content in this Unit, and the topic chosen will determine the physics knowledge that learners will develop.

Learners will research issues and apply scientific skills which will develop their scientific literacy.

Learners who complete this Unit will be able to:

- 1 Apply skills of scientific inquiry and draw on knowledge and understanding to research, plan and carry out investigative practical work on a chosen physics topic.

This Unit is a mandatory Unit of the Advanced Higher Physics Course and is also available as a free-standing Unit. The Unit Specification should be read in conjunction with the *Unit Support Notes*, which provide advice and guidance on delivery, assessment approaches and development of skills for learning, skills for life and skills for work.

Exemplification of the standards in this Unit is given in *Unit Assessment Support*.

The *Course Assessment Specification* for the Advanced Higher Physics Course gives further mandatory information on Course coverage for learners taking this Unit as part of the Advanced Higher Physics Course.

Recommended entry

Entry to this Unit is at the discretion of the centre. However, learners would normally be expected to have attained the skills, knowledge and understanding required by one or more of the following or equivalent qualifications and/or experience:

- ◆ Higher Physics Course or relevant component Units

Equality and inclusion

This Unit 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. For further information please refer to the *Unit Support Notes*.

Standards

Outcomes and Assessment Standards

Outcome 1

The learner will:

- 1 **Apply skills of scientific inquiry and draw on knowledge and understanding to research, plan and carry out investigative practical work on a chosen physics topic by:**
 - 1.1 Gathering and recording information from sources
 - 1.2 Planning/designing an experiment (or experiments) appropriate to the aim of the investigation
 - 1.3 Carrying out the investigation safely, collecting and recording data with precision and accuracy

Evidence Requirements for the Unit

Assessors should use their professional judgement, subject knowledge and experience, and understanding of their learners, to determine the most appropriate ways to generate evidence and the conditions and contexts in which they are used.

Evidence can be drawn from a variety of sources and presented in a variety of formats.

Evidence may be gathered for the Unit as a whole by combining assessment holistically in a single activity.

Transfer of evidence:

- ◆ Outcome 1 in this Unit can be used as evidence of the achievement of Outcome 1 in the *Physics: Rotational Motion and Astrophysics*, *Physics: Quanta and Waves* and the *Physics: Electromagnetism* Units of this Course.

Exemplification of assessment is provided in *Unit Assessment Support*. Advice and guidance on possible approaches to assessment is provided in the *Unit Support Notes*.

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

It is expected that learners will develop broad, generic skills through this Unit. The skills that learners will be expected to improve on and develop through the Unit 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 Unit where there are appropriate opportunities.

1 Literacy

- 1.1 Reading
- 1.2 Writing

2 Numeracy

- 2.1 Number processes
- 2.2 Money, time and measurement
- 2.3 Information handling

5 Thinking skills

- 5.3 Applying
- 5.4 Analysing and evaluating
- 5.5 Creating

Amplification of these is given in SQA's *Skills Framework: Skills for Learning, Skills for Life and Skills for Work*. The level of these skills should be at the same SCQF level as the Unit and be consistent with the SCQF level descriptor. Further information on building in skills for learning, skills for life and skills for work is given in the *Unit Support Notes*.

Administrative information

Published: April 2015 (version 1.1)

Superclass: RC

History of changes to National Unit Specification

Version	Description of change	Authorised by	Date
1.1	Minor changes to wording throughout for clarity. Inclusion of 'Transfer of Evidence' section.	Qualifications Development Manager	April 2015

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Note: readers are advised to check SQA's website: www.sqa.org.uk to ensure they are using the up-to-date version of the Unit Specification.

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