



Changing lives through learning

# Access to HE Diploma **Physical and Engineering Science**

**AIM 40007467**

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### Version Control

v1.0	New document April 2023
v2.0	May 2024. Document rebranded. 6 graded credits added to align with revised QAA Diploma specification following minor change process.

## About the Qualification

<b>Title</b>	Open Awards Access to HE Diploma (Physical and Engineering Science)
<b>Qualification Accreditation Number</b>	AIM 40007467
<b>Sector</b>	4.1 Engineering
<b>Level</b>	Level Three
<b>Funding</b>	<a href="#">Please click here for more information</a>
<b>Pricing Information</b>	<a href="#">Please click here for more information</a>
<b>Review Date</b>	31/07/2025

<b>Purpose</b>	To provide higher education progression opportunities for adults who, because of social, educational or individual circumstances, may have achieved few, if any, prior qualifications.
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<b>Available Delivery Modes</b>	Classroom-based Learning Blended Learning Distance Learning
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<b>Total Qualification Time/Guided Learning</b>	
Total Qualification Time (hours)	600
Guided Learning (hours)	600

<b>Age Range and Restrictions</b>	
Pre -16	x
16 – 18	✓
18+	✓
Any other restrictions specific to the qualification(s)	None

## **Any Specified Entry Requirements**

This qualification is suitable for learners aged 17+.

There are no specific entry requirements with regards to prior qualifications. However, providers must liaise with Higher Education Institutions when developing their Access to HE programme to identify any additional requirements for progression.

In most cases, we expect learners to have or being working towards GCSE English and maths at grade C/4 or above or equivalents.

## **Recommended Assessment Method Summary**

Assessments for Access to HE Diplomas are internally set, internally marked and externally moderated portfolio of evidence

Providers will be required to develop an assessment strategy before they begin delivery of this Diploma. This will ensure that a range of appropriate assessment methods are selected. Consideration must be given to the needs of all learners whilst also making sure that they can develop and evidence the skills, knowledge and confidence that will prepare them for the rigorous assessment regimes in higher education.

Types of evidence could include:

- a) Written assignments
- b) Essays
- c) Reports
- d) Presentations
- e) Practical assessment
- f) Examinations
- g) Project work

Assessment practices must reflect the Equality and Diversity Policy of Open Awards.

Please see the [Access to HE Provider Handbook](#) for more information.

# Qualification Structure

## Rules of Combination

<b>Credit Value of the Qualification:</b>	60
<b>Minimum Credits to be achieved at the Level of the Qualification:</b>	45
<b>Graded Credits</b>	45
<b>Ungraded Credits</b>	15

<b>Graded Units</b>	
Mandatory Academic Unit Group A – Physics	A minimum of 6 graded credits required.  The remaining 39 graded credits may be selected from groups A or B-D.
Mandatory Academic Unit Group B – Chemistry	
Optional Academic Unit Group C – Electrical and Electronic Engineering	
Optional Academic Unit Group D – Maths	
<b>Ungraded Units</b>	
Mandatory Ungraded Academic Unit Group A – Physics	A minimum of 15 ungraded credits must be selected from ungraded groups A – E.
Mandatory Ungraded Academic Unit Group B – Chemistry	
Optional Ungraded Academic Unit Group C – Electrical and Electronic Engineering	
Optional Ungraded Academic Unit Group D – Maths	
Optional Ungraded Unit Group E – Developmental	

In addition, you must ensure that at least one six (6) credit (academic graded, academic ungraded, or ungraded developmental) to be compliant with the requirements of the QAA Access to HE Diploma specification.

You can select up to a maximum of 30 credits made up of six (6) credit (academic graded, ungraded, or ungraded developmental) units.

Please note, units with the same title (ungraded and graded) are barred.

## Qualification Units

### Graded

#### Mandatory Academic Unit Group A – Physics

(A minimum of 6 graded credits required.)

Unit Reference Number	Unit Name	Credits	Level
GA33PHY14	<a href="#">Circular Motion, Simple Harmonic Motion and Resonance</a>	3	Level Three
GA33PHY06	<a href="#">Current Electricity and the Transient Response</a>	3	Level Three
GA33PHY11	<a href="#">Dynamics and Statics</a>	3	Level Three
GA33PHY08	<a href="#">Fluid Mechanics</a>	3	Level Three
GA33PHY20	<a href="#">Gravitational and Electric Fields</a>	3	Level Three
GA33PHY05	<a href="#">Heat and Thermodynamics</a>	3	Level Three
GA33PHY01	<a href="#">Magnetic Fields and Electromagnetic Induction</a>	3	Level Three
GA33PHY16	<a href="#">Non-Ionising Medical Imaging</a>	3	Level Three
GA33PHY04	<a href="#">Nuclear Physics</a>	3	Level Three
GA33PHY18	<a href="#">Physical Quantities and Algebraic Methods</a>	3	Level Three
GA33PHY17	<a href="#">Physics of the Senses</a>	3	Level Three
GA33PHY19	<a href="#">Properties of Matter</a>	3	Level Three
GA33PHY21	<a href="#">Quantum Physics</a>	3	Level Three
GA33PHY02	<a href="#">X-ray Spectra and Medical Uses of X-rays</a>	3	Level Three

#### Mandatory Academic Unit Group B – Chemistry

Unit Reference Number	Unit Name	Credits	Level
GA33CHE16	<a href="#">Analytical Chemistry</a>	3	Level Three
GA36CHE18	<a href="#">Characteristics of the Periodic Table</a>	6	Level Three
GA33CHE11	<a href="#">Chemical and Acid-Base Equilibria</a>	3	Level Three
GA33HEA10	<a href="#">Clinical Work Experience Unit</a>	3	Level Three
GA33CHE12	<a href="#">Energetics</a>	3	Level Three
GA33CHE06	<a href="#">Further Organic Chemistry</a>	3	Level Three
GA33CHE13	<a href="#">Kinetics and Redox Systems</a>	3	Level Three
GA33CHE02	<a href="#">Organic Chemistry</a>	3	Level Three

GA33CHE14	<a href="#">Periodicity</a>	3	Level Three
GA36SCI01	<a href="#">Practical Scientific Project</a>	6	Level Three
GA33CHE03	<a href="#">Reacting Amounts</a>	3	Level Three
GA33CHE09	<a href="#">Structure and Bonding</a>	3	Level Three
GA33CHE15	<a href="#">The Transition Elements</a>	3	Level Three

### Optional Academic Unit Group C – Electrical and Electronic Engineering

Unit Reference Number	Unit Name	Credits	Level
GA33EEE03	<a href="#">AC Circuit Analysis</a>	3	Level Three
GA33EEE01	<a href="#">AC Waveforms</a>	3	Level Three
GA33EEE02	<a href="#">Applied Electronics</a>	3	Level Three
GA33EEE04	<a href="#">Electronic Components</a>	3	Level Three

### Optional Academic Unit Group D – Maths

Unit Reference Number	Unit Name	Credits	Level
GA33MTH05	<a href="#">Algebra</a>	3	Level Three
GA33MTH01	<a href="#">Complex Numbers</a>	3	Level Three
GA33MTH09	<a href="#">Logarithms and Exponentials</a>	3	Level Three
GA33MTH20	<a href="#">Series and Partial Fractions</a>	3	Level Three
GA33MTH02	<a href="#">Trigonometric Methods</a>	3	Level Three
GA33MTH12	<a href="#">Vectors</a>	3	Level Three
GA33MTH07	<a href="#">Algorithms, Pseudocode and Trace Tables</a>	3	Level Three
GA33MTH10	<a href="#">Computer Logic</a>	3	Level Three
GA33MTH19	<a href="#">Statistical Methods</a>	3	Level Three
GA33MTH13	<a href="#">Coordinate Geometry</a>	3	Level Three
GA33MTH14	<a href="#">Differentiation</a>	3	Level Three
GA33MTH06	<a href="#">Integration</a>	3	Level Three
GA33MTH15	<a href="#">Matrices</a>	3	Level Three
GA33PHY18	<a href="#">Physical Quantities and Algebraic Methods</a>	3	Level Three
GA33MTH21	<a href="#">Number Systems and Data Representation</a>	3	Level Three



## Ungraded Units

A minimum of 15 graded credits required from ungraded units (academic or developmental).

### Optional Ungraded Academic Unit Group A – Physics

Unit Reference Number	Unit Name	Credits	Level
UA33PHY14	<a href="#">Circular Motion, Simple Harmonic Motion and Resonance</a>	3	Level Three
UA33PHY06	<a href="#">Current Electricity and the Transient Response</a>	3	Level Three
UA33PHY11	<a href="#">Dynamics and Statics</a>	3	Level Three
UA33PHY08	<a href="#">Fluid Mechanics</a>	3	Level Three
UA33PHY20	<a href="#">Gravitational and Electric Fields</a>	3	Level Three
UA33PHY05	<a href="#">Heat and Thermodynamics</a>	3	Level Three
UA33PHY01	<a href="#">Magnetic Fields and Electromagnetic Induction</a>	3	Level Three
UA33PHY16	<a href="#">Non-Ionising Medical Imaging</a>	3	Level Three
UA33PHY04	<a href="#">Nuclear Physics</a>	3	Level Three
UA33PHY18	<a href="#">Physical Quantities and Algebraic Methods</a>	3	Level Three
UA33PHY17	<a href="#">Physics of the Senses</a>	3	Level Three
UA33PHY19	<a href="#">Properties of Matter</a>	3	Level Three
UA33PHY21	<a href="#">Quantum Physics</a>	3	Level Three
UA33PHY02	<a href="#">X-ray Spectra and Medical Uses of X-rays</a>	3	Level Three

### Optional Ungraded Academic Unit Group B – Chemistry

Unit Reference Number	Unit Name	Credits	Level
UA33CHE16	<a href="#">Analytical Chemistry</a>	3	Level Three
UA36CHE18	<a href="#">Characteristics of the Periodic Table</a>	6	Level Three
UA33CHE11	<a href="#">Chemical and Acid-Base Equilibria</a>	3	Level Three
UA33HEA10	<a href="#">Clinical Work Experience Unit</a>	3	Level Three
UA33CHE12	<a href="#">Energetics</a>	3	Level Three
UA33CHE06	<a href="#">Further Organic Chemistry</a>	3	Level Three
UA33CHE13	<a href="#">Kinetics and Redox Systems</a>	3	Level Three
UA33CHE02	<a href="#">Organic Chemistry</a>	3	Level Three
UA33CHE14	<a href="#">Periodicity</a>	3	Level Three
UA36SCI01	<a href="#">Practical Scientific Project</a>	6	Level Three

UA33CHE03	<a href="#">Reacting Amounts</a>	3	Level Three
UA33CHE09	<a href="#">Structure and Bonding</a>	3	Level Three
UA33CHE15	<a href="#">The Transition Elements</a>	3	Level Three

### Optional Ungraded Academic Unit Group C – Electrical and Electronic Engineering

Unit Reference Number	Unit Name	Credits	Level
UA33EEE03	<a href="#">AC Circuit Analysis</a>	3	Level Three
UA33EEE01	<a href="#">AC Waveforms</a>	3	Level Three
UA33EEE02	<a href="#">Applied Electronics</a>	3	Level Three
UA33EEE04	<a href="#">Electronic Components</a>	3	Level Three

### Optional Ungraded Academic Unit Group D – Maths

Unit Reference Number	Unit Name	Credits	Level
UA33MTH05	<a href="#">Algebra</a>	3	Level Three
UA33MTH01	<a href="#">Complex Numbers</a>	3	Level Three
UA33MTH09	<a href="#">Logarithms and Exponentials</a>	3	Level Three
UA33MTH20	<a href="#">Series and Partial Fractions</a>	3	Level Three
UA33MTH02	<a href="#">Trigonometric Methods</a>	3	Level Three
UA33MTH12	<a href="#">Vectors</a>	3	Level Three
UA33MTH07	<a href="#">Algorithms, Pseudocode and Trace Tables</a>	3	Level Three
UA33MTH10	<a href="#">Computer Logic</a>	3	Level Three
UA33MTH19	<a href="#">Statistical Methods</a>	3	Level Three
UA33MTH13	<a href="#">Coordinate Geometry</a>	3	Level Three
UA33MTH14	<a href="#">Differentiation</a>	3	Level Three
UA33MTH06	<a href="#">Integration</a>	3	Level Three
UA33MTH15	<a href="#">Matrices</a>	3	Level Three
UA33PHY18	<a href="#">Physical Quantities and Algebraic Methods</a>	3	Level Three
UA33MTH21	<a href="#">Number Systems and Data Representation</a>	3	Level Three

## Optional Ungraded Unit Group E – Developmental

Unit Reference Number	Unit Name	Credits	Level
UD33DEV23	<a href="#">Communication: Academic Essay Writing</a>	3	Level Three
UD36DEV35	<a href="#">Communication: Critical Thinking in Academic Writing</a>	6	Level Three
UD33DEV25	<a href="#">Communication: Presentation Skills</a>	3	Level Three
UD23DEV21	<a href="#">Communication: Punctuation and Grammar Skills</a>	3	Level Two
UD23DEV20	<a href="#">Communication: Reading Strategies</a>	3	Level Two
UD33DEV24	<a href="#">Communication: Report Writing</a>	3	Level Three
UD23DEV09	<a href="#">ICT: Using ICT</a>	3	Level Two
UD26DEV24	<a href="#">ICT: Using ICT and Word Processing</a>	6	Level Three
UD33DEV27	<a href="#">Personal Development: Applying for HE</a>	3	Level Three
UD33DEV26	<a href="#">Personal Development: Study Skills</a>	3	Level Three
UD33DEV32	<a href="#">Professional Behaviours</a>	3	Level Three
UD33DEV30	<a href="#">Research: Practical Research for Psychology</a>	3	Level Three
UD36DEV37	<a href="#">Study Skills: Academic Skills for Access to HE</a>	6	Level Three
UD36DEV38	<a href="#">Study Skills: Access Research Project</a>	6	Level Three
UD33DEV16	<a href="#">Study Skills: Developing Research Skills</a>	3	Level Three
UD36DEV36	<a href="#">Study Skills: Research Skills and Using Information</a>	6	Level Three
UD33DEV17	<a href="#">Study Skills: Using Research Skills</a>	3	Level Three
UD23DEV19	<a href="#">Communication: Speaking and Listening Skills</a>	3	Level Two
UD23DEV22	<a href="#">Communication: Writing for Meaning</a>	3	Level Two
UD33DEV10	<a href="#">ICT: Advance Use of ICT</a>	3	Level Three
UD33DEV15	<a href="#">ICT: Advanced Word Processing</a>	3	Level Three
UD23DEV11	<a href="#">ICT: Using Presentation Software</a>	3	Level Two
UD23DEV13	<a href="#">ICT: Using Spreadsheets</a>	3	Level Two
UD23DEV14	<a href="#">ICT: Word Processing</a>	3	Level Two
UD23DEV01	<a href="#">Use of Number: Numbers and Algebra</a>	3	Level Two
UD23DEV02	<a href="#">Use of Number: Data Handling and Probability</a>	3	Level Two
UD23DEV03	<a href="#">Use of Number: Maths Project</a>	3	Level Two
UD23DEV04	<a href="#">Use of Number: Measure and Shape</a>	3	Level Two

UD23DEV06	<a href="#">Science: Introduction to Biology</a>	3	Level Two
UD23DEV07	<a href="#">Science: Introduction to Physics</a>	3	Level Two
UD23DEV08	<a href="#">Science: Introduction to Chemistry</a>	3	Level Two
UD33DEV18	<a href="#">Study Skills: Critical Analysis</a>	3	Level Three
UD33DEV31	<a href="#">Science: Biological Practical Skills</a>	3	Level Three
UD33DEV29	<a href="#">Communication: Portfolio of Writing Exercises</a>	3	Level Three
UD33DEV28	<a href="#">Personal Development: Setting Targets and Reflective Practice</a>	3	Level Three

## Delivering this Qualification

### Becoming a Provider

To deliver this qualification you must be a recognised Open Awards Provider. For more information, head to our [website](#) or contact the team on 0151 494 2072.

### How to Deliver

If you are approved to deliver Access to HE Diplomas with Open Awards, you can apply deliver this Diploma by completing a [Merlin Form](#) and submitting via the Open Awards portal. For more information, see the Provider Handbook, or contact the team on 0151 494 2072 or [customerservices@openawards.org.uk](mailto:customerservices@openawards.org.uk).

If you are not already an approved Access to HE provider, please contact the team on [enquiries@openawards.org.uk](mailto:enquiries@openawards.org.uk) to discuss the approval process.

### Registering Learners

Access to HE learners should be registered within 6 weeks of the learner's individual start date or before the learner's official (usually UCAS) application deadline via the Open Awards Secure Portal. Please make sure that learners are registered with the correct details and on the correct Diploma. If learners are registered incorrectly, there will be an administration charge to rectify errors.

Learners can be added onto existing course runs but are subject to the 6-week registration deadline.

Amendments or late registrations may be requested up to 26 weeks from the learner's start date but are only considered in extenuating circumstances and on an individual basis. These requests may result in further investigations by Open Awards and control measures may be applied.

Learner registration data can be submitted using the provided 'LRF (Access to HE)' template or via a report generated from your own MIS system. The data provided must be in accordance with the Access to the HE Data Specification document which is available via the secure portal.

You will need to register your learners via the [the Portal](#). More information can be found in our Access to HE Provider Handbook.

## **Quality Assurance and Standardisation**

Delivery of this qualification must be done so in accordance with Quality Assurance Agency (QAA) regulatory guidelines and in line with Open Awards' quality assurance processes. Please see our Access to HE Provider Handbook for more information.

## **Provider Staff Requirements**

It is expected that providers will have occupationally competent staff with relevant sector experience for their role in the delivery of the units/qualifications being offered.

For the delivery and assessment of this qualification, it is expected that staff have a qualification at the level higher than the qualification in a related academic subject and have up-to-date working knowledge and experience of best practice in assessment and quality assurance.

Providers are responsible for ensuring that their staff are occupationally competent and have access to appropriate training and support. They are also responsible for notifying Open Awards of staff changes.

## **Assessment**

Each Access to HE Diploma must be supported by assessment plans to ensure that students are able to demonstrate the skills, knowledge and confidence that will prepare them for the rigorous assessment regimes in higher education.

Tutors must develop plans which show how they intend to assess each unit and the Diploma as a whole. These plans must be internally moderated. The assessment plan should cover the whole Diploma and include:

- Number of assignments
- Type and range of assessments
- How tasks will allow for differentiation
- An assessment strategy for the whole Diploma
- A schedule of delivery and assessment/ scheme of work
- Consideration as to whether the strategy prepares learners for Higher Education

In order to achieve the Diploma, learners must meet all Learning Outcomes and associated Assessment Criteria in all units approved in the Diploma specification.

Each Assessment Criterion must be assessed only once. For graded units, a grade can only be determined upon completion of all unit learning outcomes.

There are three Grading Standards which must be applied equally to all units and all assessments within graded academic units. The three grading standards are:

1. Knowledge and Understanding
2. Subject Specific Skills
3. Transferable Skills

For more information on grading, please see the Provider Handbook or visit the QAA website [here](#).

A variety of assessment methods should be used which will allow learners the opportunity to develop experience and skills required for HE study. At least one unit from each module should be assessed using a formal and controlled assessment method e.g. examinations.

Where a unit is assessed by more than one assignment, the assessment strategy must clearly state which graded descriptors will be considered for each assignment and how you will apply a single grade for the unit.

Assessment practices must reflect the Equality and Diversity Policy of Open Awards. Reasonable adjustments may be required for individual learners to enable them to undertake assessments fairly. Please see our Reasonable Adjustments and Special Considerations Policy for more information.

### **Preparing Assignments**

One of the many benefits of an Open Awards Access to HE Diploma is that tutors design the assignments for their own provision to suit the context of delivery and to make the most of the variety of assessments methods available in individual circumstances. Please see our [Access to HE Provider Handbook](#) for more information.

### **Drafts, Submissions and Re-submissions**

It is a requirement that you publish procedures for the formal submission of work for assessment in your course handbook. These procedures must be the same for all the Access Diplomas that you are approved to deliver.

Please see our [Access to HE Provider Handbook](#) for more information.

## **Internal Verification**

Internal verification is a process by which the provider systematically samples and evaluates its assessment practices and decisions, and acts on the findings to ensure consistency and fairness. The main purpose is to improve and standardise practice in the assessment of learners.

The Access to HE Coordinator must take responsibility for internal verification of all Access to HE Diplomas at your organisation and we will expect that you have the appropriate levels of resources to implement these processes.

Verification activities must include:

- Pre-delivery verification
- Verification of achievement

## **Internal Standardisation**

Standardisation is a vital component of any robust quality assurance system and as a condition of provider approval all Open Awards Access to HE providers agree to participate in standardisation activities.

Where more than one tutor / assessor makes assessment decisions and recommendations for the award of credit to learners on the same Diploma or similar courses it is essential that internal verification processes include the standardisation of their practice.

Open Awards expect providers to plan and undertake standardisation of internally-set tasks and the outcomes of internal assessment **at least twice a year**.

Please see our [Access to HE Provider Handbook](#) for more information on verification and standardisation activities required.

## **External Standardisation**

Standardisation is a vital component of any robust quality assurance system and as a condition of provider approval all Open Awards Access to HE providers agree to participate in standardisation activities, both internally and externally.

Open Awards runs a series of standardisation activities that are accessible to all Access to HE providers.

Open Awards runs live standardisation events for each pathway to allow practitioners to peer review and learn from each other through networking. We are aware that some staff may wish to participate in standardisation activities but will be unable to attend events at the Open Awards office.

We also offer online standardisation activities. You will be provided with access to an online repository of standardisation activities, training and opportunities to share best practices.



For more information on each of these processes, please see the [Access to HE Provider Handbook](#).

## **Training and Support**

Open Awards offers a variety of training and support to Providers. Our online training and support is free of charge and can be accessed on the following link <https://oalearn.org.uk/shop>. An everlasting coupon (PLUC code) will be issued to each Provider to gain free access to these resources.

## **Recognition of Prior Learning and Achievement (RPL)**

Learners presenting evidence of accredited prior learning on non-Access courses can apply for exemption for credit on relevant Level 2 and Level 3 units where appropriate.

Learners who have achieved Access to HE Diploma credits (either from Open Awards or another AVA) may wish to claim credit towards an Open Awards Diploma. Credit transfer is dependent on the content of the unit/s from which those credits were gained matching the content of the unit/s for which they wish to claim.

For more information, please see our Recognition of Prior Learning Policy found on [the Portal](#).

## Appendices and Links

The following documents can be viewed on the Open Awards [website](#):

1. Provider Handbook
2. Enquiries and Appeals Policy and Procedures
3. Complaints Policy
4. Equality and Diversity Policy
5. Invoicing Policy
6. Privacy Policy
7. Reasonable Adjustments and Special Considerations Policy and Procedures

Additional supporting documents can be viewed in the Open Awards Portal.

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