

Access to Higher Education Unit

This unit forms part of an Access to HE Diploma. If delivering the graded version of this unit, please refer to the Provider Handbook for details on grading descriptors and the application of these across units within your programme.

Unit Title: Analytical Chemistry

Graded Unit Reference Number: GA33CHE16

Ungraded Unit Reference Number: UA33CHE16

Module: Chemistry

Level: Three (3)

Credit Value: Three (3)

Minimum Guided Learning Hours: 30

Learning Outcome (The Learner will):	Assessment Criterion (The Learner can):
1. Understand the pH scale and the use of indicators in acid-base titrations	1.1 Determine the strengths of acids and alkalis by use of Universal Indicator paper and using a standardised pH meter
	1.2 Relate the colour changes of common indicators to the pH at the equivalence points
	1.3 Explain the shapes of various pH titration curves
2. Understand the use of volumetric analysis for calculation of molarities	2.1 Perform a redox titration to obtain a set of valid results
	2.2 Explain the principle of titration and use results to calculate the molarities of solutions
3. Understand the principles of the qualitative tests for a range of positive and negative ions in simple compounds	3.1 Explain the principles of the tests used to identify a range of positive and negative ions
	3.2 Use qualitative tests to identify the ions in a mixture containing four different unknown ionic species
4. Understand the principles of the qualitative tests for a range of aliphatic functional groups	4.1 Explain the principle of the qualitative tests for a range of aliphatic functional groups

	4.2 Use qualitative tests to identify the aliphatic function groups present in a range of colourless organic liquids
5. Use Infra-red and NMR spectra to identify a range of named organic compounds	5.1 Explain the absorption of infra-red radiation in terms of covalent bond vibrations
	5.2 Explain how data from the spectra is used for identification
	5.3 Identify a range of named organic compounds