

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: Kinetics and Redox Systems

Graded Unit Reference Number: GA33CHE13

Ungraded Unit Reference Number: UA33CHE13

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. Know that reactions only occur when collisions take place between particles having sufficient energy	1.1 Explain the significance of activation energy in reactions
2. Understand the Maxwell-Boltzmann distribution of molecular energies in gasses	2.1 Draw Maxwell-Boltzmann curves for a sample of a gas at different temperatures
	2.2 Explain the effect of temperature on reaction rate using the above curves
	2.3 Use the Maxwell-Boltzmann curve to explain the effect of a catalyst on activation energy and rate of reaction
3. Know that each reaction has its own unique rate equation	3.1 Use given experimental data to construct rate equations of different reactions with varying orders of reaction
4. Know how E° values are measured and used	4.1 Calculate the E° value of a simple cell (e.g. Fe/Fe ²⁺) from given data
	4.2 Apply E° value to specified redox reactions (e.g. Cl ₂ and KI) to predict the feasibility of the reactions