

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: Genetics

Graded Unit Reference Number: GA33BIO06

Ungraded Unit Reference Number: UA33BIO06

Module: Biology; Human Biology

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 nature and causes of variation in a population	1.1 Use examples to distinguish between continuous and discontinuous variation
	1.2 Explain the roles of genetic makeup and environmental effects in producing variation
	1.3 Show how mutation and meiosis lead to genetic variation
	1.4 Evaluate the benefits and dilemmas in the use of human twin studies to investigate the causes of variation
2. Understand the principles of Mendelian inheritance	2.1 Use genetic diagrams to predict the outcomes of monohybrid inheritance
	2.2 Show how the offspring ratios for monohybrid crosses led to the formulation of Mendel's first law of inheritance
	2.3 Use genetic diagrams to predict the outcomes of dihybrid inheritance
	2.4 Show how the offspring ratios for dihybrid crosses led to the formulation of Mendel's second law of inheritance

3. Appreciate that a range of genetic systems apply to different inherited traits

- 3.1 Use genetic diagrams to predict the outcomes of inheritance involving:
- a) Sex-linkage
 - b) Multiple allele systems (e.g. ABO blood groups)
 - c) Epistasis