

Access to H.E. National Programme Unit



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| Unit Title: | Genetics | | |
| Graded Unit Code: | GA33BIO06 | Ungraded Unit Code: | UA33BIO06 |
| Pathway(s): | Health Science and Engineering | | |
| Module(s): | Human Biology Biology | | |
| Level: | 3 | Credit Value: | 3 |
| Valid from: | 31 st July 2021 | Valid to: | 31 st July 2026 |

The following QAA grade descriptors must be applied if you are delivering the graded version of this unit:

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| 1 | Understanding of the subject |
| 2 | Application of knowledge |
| 5 | Communication and presentation |
| 7 | Quality |

| LEARNING OUTCOMES | ASSESSMENT CRITERIA |
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| The learner will: | 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 |

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| 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 |