

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: The Cell

Graded Unit Reference Number: GA33BIO08

Ungraded Unit Reference Number: UA33BIO08

Module: Biology; Human Biology

Level: Three (3)

Credit Value: Three (3)

Minimum Guided Learning Hours: 30

Units barred for selection against this unit:

- From Cells to Organ Systems (GA36BIO33 / UA36BIO33)

| Learning Outcome (The Learner will): | Assessment Criterion (The Learner can): |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Understand the structure of cells as revealed by light and electron microscopes | 1.1 Identify the main components of plant and animal cells as seen using the light and electron microscope |
| | 1.2 Compare the features of light and electron microscopy in terms of specimen preparation, illumination, image formation, magnification and resolution |
| | 1.3 Identify organelles from electron-micrographs and diagrammatic representations |
| | 1.4 Describe the function of a range of cell organelles as observed using the electron microscope |
| 2. Understand how the function of the plasma membrane is related to its structure | 2.1 Relate the arrangement of phospholipid and protein in the plasma membrane (unit membrane) to properties of these molecules |

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| | 2.2 Compare ways in which molecules, liquids and solids cross the plasma membrane and relate these to the structure of the membrane and activity in the cell |
| | 2.3 Interpret data relating to transport of molecules across cell membrane |
| 3. Understand the importance of cell division | 3.1 Compare and contrast the stages and products of mitosis and meiosis |
| | 3.2 Explain the fate of cells produced by mitosis and by meiosis in humans |