

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: Microbial Biotechnology

Graded Unit Reference Number: GA33BIO23

Ungraded Unit Reference Number: UA33BIO23

Module: Microbiology

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 importance of biotechnology in a historical context	1.1 Define the term biotechnology and identify traditional and modern examples
	1.2 Explain the advantages in the use of microbes in biotechnology
2. Understand the principles involved in the identification and production of useful products from microorganisms	2.1 Describe the techniques used to identify potential new products from microbial sources (screening)
	2.2 Use specific examples to identify different types of product from microbial sources and describe the processes involved in purification of the product (downstream processing)
	2.3 Explain the stages and challenges involved in scaling up production from laboratory scale to industrial scale
3. Understand the use of large scale fermenters for commercial production of microbial products	3.1 Identify and explain the function of the main components of an industrial fermenter
	3.2 Distinguish between batch and continuous fermentation and identify advantages and disadvantages of each method

3.3 Interpret data or graphs relating the depletion of feedstock and concentration of product in a fermenter over time