

Access to H.E. National Programme Unit



Unit Title:	Integration		
Graded Unit Code:	GA33MTH06	Ungraded Unit Code:	UA33MTH06
Pathway(s):	Computing Science and Engineering Construction and the Built Environment		
Module(s):	Maths for Computing Mathematics		
Level:	3	Credit Value:	3
Valid from:	1 st August 2019	Valid to:	31 st July 2024

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

1	Understanding of the subject
3	Application of skills
7	Quality

LEARNING OUTCOMES	ASSESSMENT CRITERIA
The learner will:	The learner can:
1. Understand how the area under a straightforward curve may be approximated.	1.1 Use the trapezium rule to find an approximation for the area under a curve

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<p>2. Understand the principles and uses of integration</p>	<p>2.1 Express the relationship between differentiation and integration.</p> <p>2.2 Integrate expressions of the form ax^n for any values of a and n</p> <p>2.3 Use definite integrals to calculate areas under a curve for straightforward polynomial expressions (for regions wholly above or wholly below the a-axis)</p> <p>2.4 Use integration to find volumes of rotation for straightforward polynomial curves rotated about the x-axis or the y-axis as appropriate (angles of rotation measured in degrees or radians)</p>
<p>3. Understand techniques used to integrate more complex functions</p>	<p>3.1 Give the indefinite integrals for e^x, $\frac{1}{x}$, $\sin x$ and $\cos x$</p> <p>3.2 Find the indefinite integrals for straightforward expressions using substitution, integration by inspection and combinations of these</p> <p>3.3 Find the indefinite integrals for expressions using integration by parts</p>