

# Access to H.E. National Programme Unit



Unit Title	Matrices		
Graded Unit Code:	GA33MTH15	Ungraded Unit Code:	GA33MTH15
Pathway(s)	Computing Science and Engineering Construction and the Built Environment		
Module(s)	Maths for Computing Mathematics		
Level	3	Credit Value	3
Valid from:	1st August 2014	Valid to:	31 <sup>st</sup> 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
<b>The learner will:</b>	<b>The learner can:</b>
1. Understand the basic properties of matrices as mathematical objects	1.1 For given matrices state the matrix order 1.2 Identify the values of specified elements in a matrix 1.3 Find the determinant for a 2 x 2 matrix and a 3 x 3 matrix 1.4 Find the transpose $A^T$ of a matrix A

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2. Understand the rules of matrix algebra	2.1 Perform matrix addition and subtraction for $2 \times 1$ and $2 \times 2$ matrices 2.2 Calculate the inverse of $2 \times 2$ and $3 \times 3$ matrices 2.3 Multiply a $2 \times 2$ matrix by a scalar quantity 2.4 Multiply a $2 \times 2$ matrix by a $2 \times 2$ matrix
3. Apply matrix algebra to solve examples of simultaneous equations	3.1 Express linear simultaneous equations in matrix form 3.2 Solve linear simultaneous equations using matrix algebra
4. Find eigenvalues and eigenvectors for matrices	4.1 Calculate eigenvalues and eigenvectors for $2 \times 2$ and $3 \times 3$ matrices