

1. Title	Mathematics II (Simple Light Aeroplane Repair and Maintenance)
2. Code	EMAMBY301A
3. Range	Mathematics is needed for a wide range of calculations relating to simple light aeroplane repair and maintenance works, e.g. applicable to repair and maintenance works in aircrafts, stores, airworthiness, documentation, analysis, and tools etc
4. Level	3
5. Credit	5
6. Competency	<p style="text-align: center;"><u>Performance Requirement</u></p> <p>6.1 Knowledge</p> <ul style="list-style-type: none"> <li>◆ Able to understand the principal element of the Arithmetic unit <ul style="list-style-type: none"> <li>• Arithmetical terms and signs.</li> <li>• Methods of multiplication and division.</li> <li>• Fractions and decimals of numbers.</li> <li>• Factors and multiples in groups of numbers.</li> <li>• Meaning of weights.</li> <li>• Measurements and conversion factors.</li> <li>• Ratio and proportion in quantifying numbers.</li> <li>• Averages and percentages for groups of numbers.</li> <li>• Areas and volumes of objects, and squares, cubes, square roots and cube roots of numbers.</li> </ul> </li> <li>◆ Able to understand the principal element of the Algebra unit <ul style="list-style-type: none"> <li>• Evaluating simple algebraic expressions, addition, subtraction, multiplication and division</li> <li>• Use of brackets</li> <li>• Simple algebraic fractions</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>◆ Able to understand the principal element of the Geometry unit <ul style="list-style-type: none"> <li>• Simple geometrical constructions</li> <li>• Graphical representation</li> <li>• Nature and uses of graphs</li> <li>• Graphs of equations/ functions</li> <li>• Simple trigonometry</li> <li>• Trigonometrical relationships</li> <li>• Use of tables</li> <li>• Rectangular and polar co-ordinates</li> </ul> </li> </ul>
6.2 Theoretical and practical aspects	<ul style="list-style-type: none"> <li>◆ Able to apply the following knowledge in the aircraft maintenance. <ul style="list-style-type: none"> <li>• Arithmetic</li> <li>• Algebra</li> <li>• Geometry <ul style="list-style-type: none"> <li>▸ Graphical representation</li> <li>▸ Simple trigonometry. trigonometrical relationships, use of tables and rectangular and polar co-ordinates.</li> </ul> </li> </ul> </li> </ul>
6.3 Professional approach	<ul style="list-style-type: none"> <li>◆ Able to understand the principal elements of the subjects.</li> <li>◆ Able to understand the general knowledge of the theoretical and practical aspects of the following subjects. <ul style="list-style-type: none"> <li>• Arithmetic</li> <li>• Algebra</li> <li>• Geometry <ul style="list-style-type: none"> <li>▸ Graphical representation</li> <li>▸ Simple trigonometry. trigonometrical relationships, use of tables and rectangular and polar co-ordinates.</li> </ul> </li> </ul> </li> <li>◆ Able to apply the knowledge in the aircraft maintenance task.</li> </ul>

7. Assessment Criteria	<p>The integral outcome requirement of this UoC is:</p> <ul style="list-style-type: none"><li>(i) Able to understand the theoretical fundamentals of the subjects.</li><li>(ii) Able to give a general description of the subjects using, as appropriate, typical examples.</li><li>(iii) Able to use mathematical formulae in conjunction with physical laws describing the subjects.</li><li>(iv) Able to read and understand sketches, drawings and schematics describing the subjects.</li><li>(v) Able to apply the knowledge relating to simple light aeroplane repair and maintenance in a practical manner using detailed procedures.</li></ul>
8. Remarks	Ref: HKAR-66 Module 1