

Subject Code	Nil	<b>Remedial Mathematics</b>
Level		
Contact Hours	Lect/Tut: 20	
Student Effort Hours		
Assessment Method		<b>Subject Aim:</b>
Credit Value		<i>This subject is intended to:</i>
Pre-requisites	Nil	This is a remedial course for those students who have not taken A-Level Pure Mathematics, or who have obtained grade E or below.
Co-requisites	Nil	An approach emphasizing the fundamental concepts and definitions rather than a rigorous analytical treatment, will be adopted. The role of mathematics as a tool for engineering will be highlighted.
Exclusions	Nil	
Subject Leader/ Lecturer/Dept.	(AMA)	
<b>Learning Outcomes:</b>		
After studying this subject the student should acquire a basic understanding of the ideas and techniques of linear algebra and calculus. They may also see how mathematics can be applied in engineering contexts, and that the use of mathematics helps them to better grasp the concepts.		
<b>Syllabus Content:</b>		
<u>Calculus</u>		
<i>Functions:</i> Trigonometric functions; exponential and logarithmic functions; composite and inverses of functions.		
<i>Differential Calculus:</i> Limit and derivative; techniques of differentiation, maxima and minima, curve sketching.		
<i>Integral Calculus:</i> Definite and indefinite integral, techniques of integration; physical applications.		
<u>Linear Algebra</u>		
Arithmetic of matrices, inverse, determinant, linear equations, Gaussian elimination, Cramer's rule; vector, independence, dot and cross product, lines and planes in 2 or 3 dimensional spaces.		
<b>Learning and Teaching Approach</b> ( <i>tasks and activities designed to achieve learning outcomes</i> ):		
The method of learning will be composed of formal lectures and tutorials.		
<b>Assessment</b> ( <i>assessment of student performance resulting from learning tasks</i> ):		
Coursework will constitute the test and the assignments.		
<b>Reading List:</b>		
Hung, K.F. and Pong, G.T.Y. (2008) <i>Foundation Mathematics</i> , McGrawHill.		