

# 100-1 Preliminary Syllabus, Da-Yeh Univ

Information			
Title	工程數學(三)	Serial No. / ID	1637 / MAI3023
Dept.	機械與自動化工程學系	School System / Class	大學日間部3年1班
Lecturer	吳佩學	Full or Part-time	專任
Required / Credit	Optinal / 3	Graduate Class	No
Time / Place	(一)56 / H466 (四)2 / H441	Language	Chinese

Introduction
<p>Objective: To train students to be able to apply mathematics to solving engineering problems.</p> <ol style="list-style-type: none"><li>1.1 Gain ability in complex number manipulation.</li><li>1.2 Learn analytic complex functions and their basic operations.</li><li>1.3 Learn line integrals of analytic complex functions and their applications.</li><li>1.4 Understand infinite series of complex functions and their applications in potential theories.</li><li>1.5 Learn fundamentals of partial differential equations</li></ol>

Outline
<ol style="list-style-type: none"><li>1. Complex Numbers and Functions. Conformal Mapping</li><li>2. Complex Integration</li><li>3. Power Series, Taylor Series</li><li>4. Laurent Series, Residue Integration</li><li>5. Complex Analysis Applied to Potential Theory</li><li>6. Partial Differential Equations</li></ol>

Prerequisite
Calculus (1 and 2), Engineering Mathematics (1 and 2)