1. 課程名稱：工程數學(四)
2. 學分數：3
3. 課程編號：E620640
4. 授課教師：陳東陽
5. 課程目標：熟悉複變數理論。
6. 課程內容概要：
   Complex numbers (algebraic properties, powers and roots, exponential forms), analytic functions (limits, continuity, derivatives, Cauchy-Riemann equations, harmonic function), complex functions (trigonometric functions, exponential functions, logarithmic functions, hyperbolic functions), Integrals, Contour integrals (Cauchy integral formula, simply and multiply connected domains, Liouville’s theorem), Series (Taylor series and Laurent series), residues and poles, mapping by elementary functions, conformal mapping (preservation of angles, linear fractional transformation), applications of conformal mappings (two-dimensional fluid flow, stream function)
7. 成績計算方式：
   (a) 2 mid-term exams......................................................................................... 67%
   (b) 1 final exam ................................................................................................. 33%
8. 教科書或主要參考書：
9. 適合選修對象：大三選修
10. 建議先修基礎課程：微積分、工程數學