



المادة: تحليل عقدي

المرحلة: الرابعة

عدد الساعات: 4 ساعات

عدد الوحدات: 6 وحدات

ت	المفردات الدراسية	عدد الأسابيع
1	Complex numbers Algebraic property Cartesian coordinate Polar coordinate Regions in the complex plane The extended complex plane	
2	Analytic functions Functions in one variable Multiple valued function Application ,Limits ,Continuity ,Derivatives Cauchy-Rieman equations and analytic functions Cauchy-Rieman equations in polar form Harmonic functions	
3	Elementary Function Exponential functions Logarithmic functions Trigonometric functions Hyperbolic functions	
4	Mapping by elementary functions Linear functions transformations The transformation $w=1/z$ The transformation $w=z^2$	
5	Integrations and Applications Definite integrals Line integrals Cauchy- Goursat theorem Simply connected and multiply connected domains Indefinite integrals The Cauchy integrals formula Morera's Theorem Liouville's Theorem The fundamental Theorem of algebra	



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6	Series Convergence of sequences and series Taylor series Laurent series Zeros of analytic functions Residues and poles	