

## المحتوى العلمي المقرر:

- *Rate of change of functions*
- *Coordinates, distance, slope, equation of a straight line*
- *Functions and graph , domain, range, intercepts, symmetry asymptotes.*
  
- *Limits and continuing*
- *Properties of limits , right and left limits, limits to infinity Sandwich theorem, slope of a curve.*
- *Derivatives*
- *Derivative of functions ( sum, product, quotient, power)*
- *Parametric equations and chain rule , implicit differentiation.*
- *L'Hopital rule*
  
- *Application of derivatives*
- *Curve sketching by first and second derivatives.*
- *Maxim and minim problems.*
  
- *Transcendental functions*
- *Trigonometric functions*
- *Inverse of trigonometric functions*
- *Logarithmic and exponential functions.*
- *Hyperbolic functions and their inverses (properties, derivatives, curves).*

الكتب الأساسية:

Calculus and Analytic Geometry, by Thomas

المرجع المساند:

University Calculus with Analytic Geometry, by J. B. Morry