Faculty of Engineering & Technology

Integration with Applications and Analytical Geometry

Information :

Course Code : EMP112	**Level** : Undergraduate	**Course Hours :** 3.00- Hours

Department : Faculty of Engineering & Technology

Instructor Information :

Title	Name	Office hours
Professor	Mohamed Sayed Mohamed Abd Elkader	1
Teaching Assistant	Ammar Emad Hamdy Afifi	
Teaching Assistant	Yossif Ibrahim Motawea Ahmed Kasem	

Description :

Calculus: Indefinite integrals and Change of variables. Definitions, properties and evaluation of definite integrals. Techniques of integration: Integration by parts, Trigonometric integrals, Trigonometric substitutions, Integral of rational functions, Quadratic expressions and substitutions, Integration by reduction. Applications of definite integral: Area, Volume, Arc length in parametric, Surface area of solid revolution, Integrals in parametric functions, Polar coordinates and their applications.

Analytical Geometry: Definitions and properties of conic sections, Translation and rotation of axes, Planes and lines in space, Cylindrical and spherical coordinates, Surface of second degree.