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
Lecturer	Basma Magdy Ahmed Mohamed	5
Lecturer	Basma Magdy Ahmed Mohamed	5
Assistant Lecturer	YOUSSEF ELSAYED ABDELHAFEZ KANDIEL	
Teaching Assistant	Mariam Mohamed Ali Ahmed Elshimey	
Teaching Assistant	Farah Hossam Eldin Mahmoud Abdelhamed Ibrahim	
Teaching Assistant	Mohamed Fathy Salem Mohamed	
Teaching Assistant	Shahd Ahmad Samir Ibrahim	

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.