Faculty of Engineering & Technology

Integration with Applications and Analytical Geometry (Math 2)

Information :

Course Code :	MTH 112	**Level :**	Undergraduate	**Course Hours :**	3.00- Hours

Department : Faculty of Engineering & Technology

Instructor Information :

Title	Name	Office hours
Lecturer	Hany Abd El Ghaffar Abd El Aty El Deeb	
Assistant Lecturer	Doaa Nabil Sayed Mohamed Elsayed Khodair	8

Description :

1) Calculus:
A) Indefinite integrals. properties and evaluation of definite and indefinite integrals of algebraic and transcendental functions. Fundamental Theorem of calculus.
B) Techniques of integration:
1) Integration by parts,,
2) Trigonometric substitutions,
3) Integration by partial fractions,
4) Quadratic expressions and substitutions,
5) Integration by reduction.
C) Applications of definite integral:
1) Area, 2) Volume, 3) Arc length of parametric functions.
4) Surface area of solid revolution,
2) Analytic Geometry:
A) lines and Planes in space. vector equations.
B) Definitions and properties of conic sections, parabola, hyperbola, and ellipse.
C) Translation and rotation of axes.
D) Quadric Surfaces. Ellipsoid, Hyperboloid, paraboloid.