

قسم الرياضيات – كلية العلوم- جامعة الملك سعود  
الفصل الثاني 1435-1436هـ

MATH 106 Integral Calculus

معلومات عن المحاضر: د. ناصر بن تركي.  
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الساعات المكتبية: الاحد ، الثلاثاء والخميس: من الساعة 7:15 ص الى 8:00 ص  
ومن الساعة 10:00 ص الى الساعة 11:00 ص ومن الساعة 12:00 م الى الساعة  
01:00 م.

يمكن تحديد موعد خارج اوقات الساعات المكتبية عن طريق الايمل.

MATH 106 Integral Calculus:

Book: Calculus: The Classic Edition (Fifth Edition),  
by Earl W. Swokowski.

Chapter 5:

Antiderivatives and Indefinite Integrals, Change of Variables in Indefinite Integrals, Summation Notation and Area, The Definite Integral, Properties of the Definite Integral , The fundamental Theorem of Calculus, Numerical Intergration: Including also the Error estimate.

Chapter 7:

Logarithmic and Exponential Functions, The Natural Logarithmic Function, The Natural Exponential Function, Intergration , General Exponential and Logarithmic Functions.

Chapter 8:

Inverse Trigonometric and Hyperbolic Functions, Inverse Trigonometric Functions, Derivatives and Integrals , Hyperbolic Functions , Inverse

Hyperbolic Functions.

Chapter 9:

Techniques of Integration : Integration by parts , Trigonometric Integrals , Trigonometric Substitutions , Integrals of Rational Functions, Integrals Involving Quadratic Expressions, Miscellaneous Substitutions.

Chapter 10:

Indeterminate Forms and Improper Integrals: Indeterminate Forms, Integrals with Infinite Limits of Integration, Integrals with Discontinuous Inegrand.

Chapter 6:

Application of the Definite Integral: Area, Solid of Revolution, Volumes by Cylindrical Shells , Arc Length and surfaces of Revolution

Chapter 13:

Plane Curves and Polar Coordinates: Plane Curves, Tangent Lines and Arc Length, Polar Coordinate, Integrals in Polar Coordinates