

First Semester: 1437-1438(February-June, 2017)

MATH 203: Differential and Integral Calculus

Course details

Name of Instructor: Prof. Dr. T. M. G. Ahsanullah

Email: tmga1@ksu.edu.sa **Website:** fac.ksu.edu.sa/tmga1 **Office Tel.:** 011-4675177

Office: 2B80 (Building 4, Department of Mathematics, College of Science, KSU)

Books: Calculus by E. R. Swokowski, M. Olinic, and D. Pence, PWS Publishing Company, Boston.

You may consult Lecture Notes on Math 203 by Dr. Asif Qureshi as supporting materials

STT (1 3 5) slot (Group 20446: 9.00 AM – 9.50 AM in Room 1B 13 Building 4)

Chapter 8: Infinite Series

- Sequences
- Convergence or Divergence Series
- Positive-term Series
- The Ratio and Root Tests
- Alternating Series and Absolute Convergence
- Power Series
- Power Series Representation of Functions
- Maclaurin and Taylor Series

Chapter 13: Multiple Integrals

- Double Integrals
- Area and Volume
- Double Integrals in Polar Coordinates
- Surface Area
- Triple Integrals
- Moments and Center of Mass
- Cylindrical Coordinates
- Spherical Coordinates

Chapter 14: Vector Calculus

- Vector fields
- Line Integrals
- Independence of Path
- Green's Theorem
- Surface Integrals
- The Divergence Theorem
- Stokes's Theorem

Mark Distribution:

MT 1: 25

MT2: 25

Tutorial: 10

Final: 40

Total: 100