

## **Second Semester: 1436-1437(January-May, 2016)**

### **MATH 203: Differential and Integral Calculus**

#### **Course details**

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

**Email:** <[tmga1@ksu.edu.sa](mailto:tmga1@ksu.edu.sa)> **Website:** <[fac.ksu.edu.sa/tmga1](http://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 20448:** 9.00 AM – 9.50 AM in Room 1B48 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**

**Mid-Term Exam 1: 22/05/1437H (Wednesday, March 2, 2016 G) 7.00 PM – 8.30 PM**

**Mid-Term Exam 2: 06/07/1437H (Wednesday, April 13, 2016 G) 7.00 PM-8.30 PM**

**Final exam date will be announced when available**