King Saud University

Department of Mathematics

M-203(First Semester 1446)

Course outlines and Exercises for Tutorial Classes

Book: Calculus by Swokowski, Olinick, and Pence (6th Edition)

8.1. **Sequences** 19,24,26,27,30,38,42
8.2. **Convergent or divergent series**2,4,5,8,9,11,13,26,27,31,32,33,35,40,43,44,45,46,48.
8.3. **Positive term series** 2,3,4,6,9,12,14,15,18,19,22,23,26,27,31,32,33,36,38,42,45.
8.4. **The Ratio & Root tests** 3,4,6,7,10,12,15,16,17,20,23,25,27,30,37,38,40.
8.5. **Alternating Series & Absolute Convergence**1,4,6,9,14,16,19,22,24,25,29,32.
8.6. **Power Series** 5, 6, 11,18,21,25,29,30,33.
8.7. **Power Series Representation of Functions**1,2,5,6,10,15,18,1923,27,28,31,34.
8.8. **Maclaurin & Taylor Series**7,8,10,11,13,15,16,18,19,20,21,23,25,28,30,31,33,34,36, 38, 40,42
13.1. **Double Integrals**14,15,19,20,22,23,25,27,29,31,46,47.
13.2. **Area & Volume** 8, 9,10,12,22,24,29,31.
13.3. **Double Integrals in Polar** 8,11,12,13,15,20,21,22,23,26,27.
13.4. **Surface Area** 1, 2,6,8,11,12.
13.5. **Triple Integrals** 2, 5, 6,12,15,16,22,30,31.
13.6 **Moments & Centre of Mass** 1,4,12,20,24,25.
13.7. **Cylindrical Coordinates** 2,3,4,16,21,31,33,35,36,38,39.
13.8. **Spherical Coordinates** 2,5,6,12,16,21,28,31,37,40.

14.1. **Vector Fields** 13,14,17,20.
14.2. **Line Integrals** 5, 8,14,15,16,18,20,24.
14.3. **Independence of Path** 4, 5, 6,11,14,15,18,20,21.
14.4. **Green's Theorem** 3,4,5,10,11,14,15,18,20,21.
14.5. **Surface Integrals** 2,3,11,14,16,17.
14.6. **The Divergence Theorem** 1, 2,8,9,10,12.
14.7. **Stokes's Theorem** 1, 5, 7.