

Math 202**CALCULUS II****King Abdulaziz University.****Department of Mathematics.****Second Semester 1434-1435. (2013 - 2014)****Math 202 Syllabus.****Textbook : Calculus Early Transcendental, Sixth Edition, Author: James Stewart.**

| Chapter | Section | Definitions & Theorems | Examples | HW |
|------------------|--|---|-----------------|--|
| Chapter 3 | 3.11 Hyperbolic Function | Definition of the Hyperbolic functions, hyperbolic identities, derivatives, inverse hyperbolic functions, their derivatives. Tables 1-6. Figures 1-3,8-10 | 1-5 | 1-6,8-18(even),19,20,23 30-47(even),51(a) |
| Chapter 4 | 4.4 Indeterminate forms and L'Hospital's Rule | All Forms | 1-9 | 8-10,12-64(even), 17,23,25,31,41,45,51 |
| | 4.9 Antiderivatives | Definition, theorem 1, table 2 | 1-4,6-7 | 6-20(even),26-48(even) 58,60,63 |
| Chapter 5 | 5.1 Areas and Distances | The area problem: Figures 1-6,8-13. Definition 2 | 1 | --- |
| | 5.2 The Definite Integral | Definition 2. Note 1-3,5. Figures 1-4. Theorem 3,4. Equations 8-11. Properties 1-8. | 1,4,6-8 | 36-40(even),41-43,47-49 52,56 |
| | 5.3 The Fundamental Theorem of Calculus | Equation 1,5. FTC1,FTC2 (No proofs). FTC p. 387 | 2,4-9 | 8-46(even),54,56,57,59,71 |
| | 5.4 Indefinite Integrals and the Net Change Theorem | Indefinite integral, table 1. Applications pages 394,395 | 1-6 | 6-18(even),22-44(even) 60,62,65 |
| | 5.5 The substitution Rule | Equations 1-7. The substitution rule. The substitution rule for definite integral. Symmetry | 1-11 | 8-46(even),52-70(even) 76-80,82 |

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| | | | | Review CH 5, page 410 10-38(even),44-48(even) 52,53,56,61,66. |
| Chapter 7 | 7.1 Integration by Parts | Equations 1,2,6 | 1-5 | 2-38(even) |
| | 7.2 Trigonometric Integrals | All strategy | 1-9 | 2-48(even) |
| | 7.3 Trigonometric Substitution | All | 1-7 | 4-30 (even) |
| | 7.4 Integration of Rational function by Partial Fractions | All | 1-6,8,9 | 8-36 (even) 40-50 (even),51,56 |
| | 7.5 Strategy for Integration | All with "Can we integrate all continuous functions?" | 1-5 | 2-80(even),81 |
| | 7.8 Improper Integrals | Type 1 and 2. Comparison Theorem. | 1-3,5-10 Example 4 to be read by students | 6-42 (even),49-54,56,69 Review CH 7, pages 518 2-50 (even),71 |
| Chapter 6 | 6.1 Areas Between Curves | Rules 2,3 | 1-2,5-6 | 6-32(even),48 |
| | 6.2 Volumes | Definition of volume. Disk and washer page 427 | 2-6 | 2-16(even),32-36(even) Review CH 6, page 446 2-10(even),15 |
| Chapter 8 | 8.1 Arc Length | Formulas 2-5 | 1,2,4 | 8-20 (even),33,35 |
| | 8.2 Area of a Surface of Revolution | Formulas 4-8 | 1-3 | 6-16 (even) Review CH 8, page 562 1-4, 7-8 |