Math 202   CALCULUS II

King Abdulaziz University.   **Department of Mathematics.**

Second Semester 1438-1439. (2017 - 2018)   **Math 202 Syllabus.**

Textbook : Calculus Early Transcendental, seventh Edition,   Author: James Stewart.

ملاحظة مهمة: سوف يتم تدريس الباب السابع قبل الباب السادس

Chapter	Section	Definitions & Theorems	Examples (Exercises)	HW على الطالبات
Chapter 3: Differentiation Rules	**1st +2nd week** **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 (11,39,42)	1-21 (odd),31-45(odd),38,42
Chapter 4: Applications of Differentiation	**2nd + 3rd week** **4.4 Indeterminate forms and L'Hospital's Rule**	All Forms	1-9 (8,23,49,63)	7-65 (odd),8,54

	3rd week **4.9** **Antiderivatives**	Definition, theorem 1, table 2	1-4,6-7 (5,9,15)	1-47 (odd)
Chapter 5: Integrals	**4th week** **5.1** **Areas and Distances**	The area problem: Figures 1-6,8-13. Definition 2	1	
	4th week **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 (39,50,59)	17-20,35,39,41,42,47-50,53 59-63 (odd)
	5th week **5.3** **The Fundamental Theorem of Calculus**	Equation 1,5.FTC1,FTC2 (No proofs)	2,4-9 (33,59)	7-43 (odd),55-59 (odd)
	5th week **5.4** **Indefinite Integrals and the Net Change Theorem**	Indefinite integral, table 1.Applications, equations 2,3	1-6 (37)	5-17 (odd),21-45 (odd)
	6th week **5.5** **The substitution Rule**	Equations 1-7. The substitution rule. The substitution rule for definite integral. Symmetry	1-11 (29,33,44)	7-47 (odd),53- 73(odd),24,40,44,48

Chapter 7 Techniques of integration	7th week 7.1 Integration by Parts	Equations 1,2,6	1-5 (14, 37)	3-41 (odd)
	8th week 7.2 Trigonometric Integrals	All strategy	1-9 (17,33)	1-49 (odd),44
	9th week 7.3 Trigonometric Substitution	All	1-7 (29)	5-29 (odd),24
	10th week 7.4 Integration of Rational function by Partial Fractions	All	1-6,8,9 (49)	7-33 (odd), 39-51
	10th week 7.5 Strategy for Integration	All with "Can we integrate all continuous functions?"	1-5 (65,79)	1-81 (odd)
	11th +12th week 7.8 Improper Integrals	Type 1 and 2. Comparison Theorem.	1-10 (39)	5-39 (odd),41,49-55

Chapter 6: Applications of integrals	**13thweek 6.1 Areas Between Curves**	Rules 2,3	1-2,5-6	1-17 (odd),21-29(odd)
	13thweek 6.2 Volumes	Definition of volume. Disk and washer	2-6 (13,15)	1-17
Chapter 8: Further Applications of Integrations	**14thweek 8.1 Arc Length**	Formulas 2-6	1,2,4 (11)	7-15,17,19-20,33,35
	14thweek 8.2 Area of a Surface of Revolution	Formulas 4-8	1-3 (13)	5-16

The total of 100 marks are distributed as follows:

Exam 1 = 25%

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Assignments = 15%

Final Exam = 35% (The whole course contents are included)

	Exam 1	Exam 2	Alternative Exam
Time	2-3:30	2-3:30	11-12:30
Date	6th week Thursday 13-6-1439	11th week Thursday 19-7-1439	13th week Thursday 3-8-1439
Curriculum	3.11, 4.4, 4.9, 5.1, 5.2 , 5.3and 5.4	5.5, 7.1, 7.2, 7.3, 7.4, 7.5	Exam 1 or 2