

Information – Math 232

Professor	Marcello Lucia Office 1S-226, marcello.lucia@csi.cuny.edu http://www.math.csi.cuny.edu/~mlucia/																		
Time and Place	Monday, Wednesday: 6:30–8:10pm, 2S-219																		
Office hours	Monday, Wednesday: 3:00–4:30pm, or by appointment.																		
Textbook	CALCULUS-EARLY TRANSCENDENTALS, by <i>Rogawski</i> W.H. Freeman & Co. (2015) ISBN-13: 978-1-4641-1488-5, ISBN-10: 1-4641-1488-9																		
Course Outline	This course aims to expand the notions introduced in Calc 1. It provides further applications of the <i>definite integral</i> , like for instance computing the volume of some three-dimensional solids. Several new technics to integrate functions will be discussed like <i>integration by parts</i> , method of <i>partial fractions</i> . The course will also cover the notion of <i>sequence of numbers</i> , discuss what is an <i>infinite sum</i> and introduce technics to approximate functions using polynomials.																		
Course Grade	The final course grade is determined as follows: <table> <tr> <td></td><td></td><td>Test 1</td><td>10%</td><td></td></tr> <tr> <td>Homework</td><td>5%</td><td>Test 2</td><td>15%</td><td>Final 45%</td></tr> <tr> <td></td><td></td><td>Test 3</td><td>25%</td><td></td></tr> </table> The material on each exam is cumulative and based on the lectures given in class together with the HW. First test: Wednesday, September 30th Second Test: Monday, November 2nd Third Test: Wednesday, December 2nd To better understand some solutions written on a test, you may be asked to provide additional oral explanations during my office hours.						Test 1	10%		Homework	5%	Test 2	15%	Final 45%			Test 3	25%	
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		Test 3	25%																
Homework	You must do the HW related to the sections that have been covered during the week. There is a deadline every Sunday. The HW must be submitted using “Webwork” that can be found on the mathematics Website of CSI. Go to http://www.math.csi.cuny.edu/ and follow the links.																		
Integrity	Like any university and any research institute, CUNY has an academic integrity code that can be found on Brightspace.																		
Cell phone	Let us stay focused on the class ! Cell phone must be switched OFF.																		

Lesson Plan

Below, each lesson corresponds to a 50minutes class

Lesson	Sections	Topics	Homework
1	5.2, 5.3	Definite, indefinite integral	Webwork 5.2, 5.3
2	5.4	Fundamental Theorem of Calculus	Webwork 5.4
3	5.7	Integration by substitution	Webwork 5.7
4	5.8	Further integral formula	Webwork 5.8
5	6.1	Area between two curves	Webwork 6.1
6	6.2	Volume, Average value	Webwork 6.2
7, 8	6.3	Volume of revolution	Webwork 6.3
9, 10	6.4	Cylindrical shells	Webwork 6.4
11, 12	7.1	Integration by parts	Webwork 7.1
13, 14	7.2	Trigonometric integrals	Webwork 7.2
15, 16		Exam 1 (September 30th)	
17, 18	7.3	Trigonometric substitution	Webwork 7.3
19, 20	7.5	Partial fractions	Webwork 7.5
21, 22	7.6	Strategies for integration	Webwork 7.6
23, 24	7.7	Improper integrals	Webwork 7.7
25, 26	10.1	Sequences	Webwork 10.1
27, 28	10.2	Series	Webwork 10.2
29, 30	10.3	Convergence of positive series	Webwork 10.3
31, 32	10.4	Absolute & conditional convergence	Webwork 10.4
33, 34		Exam 2 (November 2nd)	
35, 36	10.5	Ratio & Root tests	Webwork 10.5
37, 38	10.6	Power series	Webwork 10.6
39, 40	10.7	Taylor polynomials	Webwork 10.7
41, 42	10.8	Taylor series	Webwork 10.8
43, 44	8.2	Arc length & surface area	Webwork 8.2
45, 46	11.1	Parametric equations	Webwork 11.1
47, 48	11.2	Arc length & speed	Webwork 11.2
49, 50		Exam 3 (December 2nd)	
51, 52	11.3	Polar coordinates	Webwork 11.3
53, 54	11.4	Area in Polar coordinates	Webwork 11.4
55, 56	.	Review <i>Last Day of Class (Dec. 14th)</i>	