

## Information – Math 231

<b>Professor</b>	Marcello Lucia Office 1S-226, marcello.lucia@csi.cuny.edu <a href="http://www.math.csi.cuny.edu/~mlucia/">http://www.math.csi.cuny.edu/~mlucia/</a>												
<b>Time and Place</b>	Monday, Wednesday: 6:30–8:10pm, 1S-219 Office hours: Monday: 2:30–4:30pm and Wednesday: 3:30–4:30pm.												
<b>Textbook</b>	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												
<b>Course Outline</b>	This course aims to study functions in two and three variables. The notion of continuity, differentiability, integral of several variable functions will be covered by this class.												
<b>Course Grade</b>	The final course grade is determined as follows: <table style="margin-left: auto; margin-right: auto; border: none;"> <tr> <td style="padding-right: 20px;"><b>Homework</b></td> <td style="padding-right: 20px;">5%</td> <td style="padding-right: 20px;"><b>First Test</b></td> <td>10%</td> </tr> <tr> <td><b>Matlab</b></td> <td>5 %</td> <td><b>Second Test</b></td> <td>20%</td> </tr> <tr> <td><b>Quizzes</b></td> <td>20%</td> <td><b>Final</b></td> <td>40%</td> </tr> </table> <p><b>Homework:</b> 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 <a href="http://www.math.csi.cuny.edu/">http://www.math.csi.cuny.edu/</a> and follow the links.</p> <p><b>MatLab:</b> Projects can be found on the mathematical Website.</p> <p><b>Quizz:</b> <i>Every Wednesday, you must expect a quizz</i></p> <ul style="list-style-type: none"> <li>• There will be a total of 10 quizzes, each one will be graded out of 10 (a total maximal sum of 100)</li> <li>• The sum of those quizzes will be 20% of the final grade</li> <li>• A sum <math>\leq 40</math> will be an <i>F</i> for this class</li> </ul> <p><b>First test:</b> Monday, September 18th 2017  <b>Second Test:</b> Wednesday, October 11th 2017  <b>Final:</b> Refer to the official calendar of CSI  <b>The material for the tests is cumulative</b>  <b>Matlab Deadline:</b>  The Four MatLab Projects must be submitted by Sunday December 10th, 2017.</p>	<b>Homework</b>	5%	<b>First Test</b>	10%	<b>Matlab</b>	5 %	<b>Second Test</b>	20%	<b>Quizzes</b>	20%	<b>Final</b>	40%
<b>Homework</b>	5%	<b>First Test</b>	10%										
<b>Matlab</b>	5 %	<b>Second Test</b>	20%										
<b>Quizzes</b>	20%	<b>Final</b>	40%										
<b>Integrity policy</b>	Cheating hurts everybody. Please refer to <a href="http://www.csi.cuny.edu/privacy/cuny_academic_integrity.pdf">http://www.csi.cuny.edu/privacy/cuny_academic_integrity.pdf</a>												
<b>Cell phone</b>	Let us stay focused on the class ! Thus, cell phone must be switched OFF.												
<b>Lesson Plans</b>	Below, each lesson corresponds to a 50minutes class												

<i>Lesson</i>	<i>Sections</i>	<i>Topics</i>	<i>Homework (Webwork)</i>
1	1.2, 1.4	Linear and quadratic functions	1.2, 1.4
2	1.5, 1.6	Inverse functions, Exponential & Log functions	1.5, 1.6
3	2.1, 2.2	Limits	2.1, 2.2
4	2.3	Limit laws	2.3
5	2.4	<b>Quiz 1</b> , Continuity	2.4
6	2.5	Evaluating limits	2.5
7	2.6	Trigonometric functions	2.6
8	2.7	Limits at infinity	2.7
9	2.8	Intermediate Value Theorem	2.8
10	3.1, 3.2	Notion of Derivative	3.1, 3.2
11, 12		<b>Exam 1</b> (Monday, Sept. 18th)	
13	3.3	Product and quotient rules	3.3
14	3.4	Rates of change	3.4
15	3.5	Higher derivatives	3.5
16	3.6	Trigonometric functions	
17	3.6	Derivative of trigonometric function	3.6
18	3.7	Chain rule	3.7
19, 20	3.8	Implicit differentiation	3.8
21, 22		<b>Exam 2</b> (Wednesday, Oct. 11th)	
23, 24	3.9	Derivatives of exponentials and logs	3.9
25	3.10	Related rates	3.10
26	4.1	Linear approximation	4.1
27, 28	4.2	Extreme values	4.2
29, 30	4.3	First derivative test	4.3
31, 32	4.4	Concavity, Second derivative	4.4
33	4.5	L'Hôpital rule	4.5
34	4.6	Graph sketching, asymptotes	4.6
35	4.6	Graph sketching, asymptotes	4.6
36	4.7	Optimization	4.7
37, 38		Optimization	4.7
39, 40	5.1	Approximating Area	5.1
41, 42	5.2	Definite Integral	5.2
43, 44	5.3	Antiderivative	5.3
45, 46	5.4, 5.5	Fundamental Theorem of Calculus	5.4, 5.5
47, 48	5.7	Integration by substitution	5.7
49, 50	5.8	Integration of transcendental functions	5.8
51, 52		Problems on integrations	
53, 54		EXAM	
55, 56		REVIEW	