Information – Math 233

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, 1S-217

Office hours:
Monday: 4:30–5:30pm, and Wednesday: 4:30–6:30pm.

Textbook CALCULUS (FOURTH EDITION)
by *Rogawski, Adams & Franzosa,*
W.H. Freeman & Co. (2019)
ISBN: 9781319055844
e-book ISBN: 9781319411657

Course Outline This course expends what has been done in Calculus 1 to tackle functions of several variables. Such a generalization is motivated by the facts that in the field of applications, problems depend on several variables.

Course Grade The final course grade is determined as follows:

Homework	10%	**Test 2**	30%
Test 1	20%	**Final**	40%

Homework: 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.

Exam information

- **First test**: Monday, October 3rd, 2022
  Second Test: Monday, November 14th, 2022
  Final: Refer to the official CSI calendar
  The material for the tests is cumulative
  Depending on how you have answered a question on an exam, you may be asked to provide additional oral explanations during my office hours.
- If you cheat, you get an F for this class. Please refer to
  `http://www.csi.cuny.edu/privacy/cuny_academic_integrity.pdf`

Below, each lesson corresponds to a one-hour class.

Lesson	*Sections*	*Topics*	*Homework (Webwork)*
1	12.1, 12.2	Vectors	12.1 & 12.2
2		*Homework Problems*	
3	12.3	Dot Product	12.3
4		*Homework Problems*	
5	12.4	Cross Product	12.4
6	12.5	Planes in three-space	12.5
7	12.6	Quadratic surface	12.6
8		*Homework Problems*	
9	13.1	Vector-valued functions	13.1
10	13.2	Calculus of vector-valued functions	13.2
11	13.3	Arc-length and speed	13.3
12		*Homework Problems*	
13	14.1	Functions of several variables	14.1
14	14.2	Limits and continuity	14.2
15, 16	14.3	Partial derivatives	14.3
17, 18		*Homework Problems*	
19, 20		**Exam 1** (Monday, October 3rd)	
19	14.4	Tangent planes	14.4
20		*Homework Problems*	
21	14.5	Gradient, Directional derivatives	14.5
22	14.6	Chain rule	14.6
23	14.7	Optimization	14.7
24		*Homework Problems*	14.7
25, 26	14.7	Optimization	14.7
27, 28		*Homework Problems*	14.7
29, 30	14.8	Lagrange multipliers	14.8
31, 32		*Homework Problems*	
33, 34	15.2	Double integrals	15.2
35, 36	15.3	Triple integrals	15.3
37, 38	15.4	Integration in other coordinates	15.4
39, 40		**Exam 2** (Monday, November 14th)	
41, 42	15.5	Change of variables	15.5
43, 44	16.1	Vector fields	16.1
45, 46	16.2	Line integrals	16.2
47, 48	16.3	Conservative vector fields	16.3
49, 50	16.4	Parametrized surfaces	16.4
51, 52	16.4	Surface integral	16.4
53, 54	16.5, 17.1	Surface integral of vector fields, Green's Theorem	16.5, 17.1