Math 213 ST Course Information Sheet and Syllabus

Class Meets T,Th 6:00pm – 7:40pm in NAC 4/130
Instructor: Giancarlo Paolillo
Email: apaolillo@ccny.cuny.edu (by far the best way to contact me)

Office Hours: T 4:50pm – 5:40pm in MR 516* and Th 4:00pm – 4:50pm in MR 516*
*I will be moving office at some time in the semester -not sure when. So this location will be updated at that time.
Text: Stewart: Early Transcendentals (9th ed.), Clegg and Watson. ISBN: 9781337613927

Note that while I may assign some problems from the text, most of the homework will be from the free online homework system. So, you don't need to purchase the text. You should find an older edition for less money, so you can prepare the material before class. For the homework I do assign from the text, you can photograph the pages from a copy of the text on reserve in the science library.

Quizzes and Tests There will be about 8 in-class quizzes, three in-class tests and a comprehensive final exam during the final exam period. The lowest quiz score will be dropped, and the remaining quizzes will be averaged to count as a fourth in-class exam. Then the lowest of these four grades will be dropped to determine your test average. At least 10 days' notice will be given for in-class tests and quizzes will also be given advanced notice.

Grading Breakdown:

Component	**Part of Course Grade**
Webwork Homework	Extra Credit – see below
Quiz Average dropping lowest	Counts as 4th test
Average of Top 3 Test Scores	60%
Comprehensive Final Exam	40%

Total Webwork score S will count towards the grade from top three test scores as follows: $100 \geq S \geq 90\%$ add 5 points, $90 > S \geq 80\%$ add 3.5 points, $80 > S \geq 70\%$ add 2.5 points, $70 > S \geq 60\%$ add 1.5 points, $60 > S \geq 50\%$ add 0.5 point, $50\% > S$ no upgrade. So, doing well on the homework can be the difference between a C+ and a B on your final grade.

Course Policies: There will be no makeup quizzes or tests, but I will drop both the lowest quiz and the lowest test (which might be the quiz average that counts as a 4th test). By February 7th , you must inform me of any classes you will be unable to attend and for what compelling reason, e.g. religious holiday, scheduled medical procedure, etc. I will then use this information to make a **tentative schedule** for the class. Various reasons for missing class (such as a planned boating trip) will not be considered compelling. If you must miss quizzes and or tests due to becoming ill, or for some other valid reason, those quizzes or tests will either be dropped from your average, if you haven't already missed a quiz or a test, or I will handle the situation on a case-by-case basis. I wish to be flexible and accommodating and am willing to use subscores from the same material from later tests or the final exam to fill in missing work when you have a good reason for missing this work. But there is a limit to how far I can go with this and under no circumstances will I replace an in-person assessment score with an online one. I expect you to inform me of why you missed a quiz or exam within a week of that assessment. Otherwise, I will consider it an unexcused absence and I won't replace the grade with a later subscore. Also, to get a grade other than an incomplete at the end of the term, you must take the final exam. If you miss the final exam due to becoming ill, then I will assign you a grade of incomplete. To get a grade you will then have to take a makeup final exam that the department will offer after some time in the summer. But this is an option only for those who have become ill or have some other unforeseen circumstance that prevented them from taking the final. To the extent possible, these circumstances should be documented.

Homework: You are expected to read the textbook, preferably in advance of covering a section in class. It is part of the homework to do so.

We will also be using the **Webwork** free homework system available at

https://webwork.ccny.cuny.edu/webwork2/25_Sp213_ST

Save this link so that you can easily access it in the future.

Your Webwork username is your CCNY domain name typed in all ***lowercase letters***, and your password is the one that goes with it. These are the same as your Citymail userid and password. Be careful when inputting your username and password, especially with tablets and phones. Autocomplete may put your entire email address instead of just the part before @. Also beware of automatic capitalizing. WeBWorK is case sensitive and the username won't work unless it is typed all **lowercase**. NOTE: you cannot change your userid or password on the system, or the email address you want it to use. If you change your domain password on CCNY's site, then it will automatically change on Webwork. Also NOTE that your passwords expire every 180 days, so you may suddenly be unable to logon after successfully using the system in the past. In that case, you must change your password by going to https://reset.ccny.cuny.edu/student/ and filling in the request form.

Attendance: You are expected to attend class. If you must miss class for a foreseen legitimate reason (such as a religious observance), then you must notify me by February 7th . If you miss class due to an unforeseen, legitimate reason (such as illness), then you must inform me by email as soon as you are able. Such absences are excused absences. Unexcused absences exceeding 4 may result in up to 7 percentage points being deducted from your term average.

Final Exam: The final exam has not yet been scheduled. I will let you know the exact time once that information is available. It will be during the final exam period from May 19th to May 22nd.

My Math Department Webpage I will post useful documents such as the syllabus on my Math Department Webpage. Here is the link to that: https://math.sci.ccny.cuny.edu/person/anthony-paolillo/

Brightspace: I will be using the Brightspace course management system extensively to send you emails, post documents, including review problems and study guides for tests. You must use the email that Brightspace is connected to or switch that email to your preferred one – I believe this can be done, but don't personally know the details of how to do this. Email: If you are not receiving emails sent by me you must let me know as soon as you become aware of this and fix the situation immediately. You should also make it a habit to check your email once a day. I recommend using the citymail email, since other important messages from the college are all sent to that email.

How to set up and access Brightspace: The following is a link that explains everything:

https://broadcast.ccny.cuny.edu/CMS/Brightspace_Log_in_Instructions_CUNY_Login.pdf

If problems persist, there is a help center on the first floor of the Cohen library at the bottom of the stairs one descends since the entrance to the library is on the second floor.

Statement on Academic Integrity: Any cheating or plagiarism will be dealt with in accordance with standard university procedures. For more information, see https://www.ccny.cuny.edu/about/integrity . Better yet, just don't do it.

Course Webpage: https://math.sci.ccny.cuny.edu/course/math-21300/
On the course webpage, you will find old final exams and other study materials.
I will provide additional study materials before tests. You should make sure to review all your quizzes, especially those you do poorly on, so that you can work on that material prior to a test.

Artino Tutoring: Here is the link: https://math.sci.ccny.cuny.edu/page/math-tutoring/

Marshak Tutoring: Here is the link: https://math.sci.ccny.cuny.edu/page/tutoring/

Accessibility: All students requiring special accommodations will be accommodated in coordination with the Accessibility Center. The Accessibility Center site is at https://www.ccny.cuny.edu/accessability . **It is your responsibility to inform me of any accommodations at least 7 days before any quiz, test, or the final exam**.

See the **Tentative Schedule** to find out what sections and material we will be covering, including when I plan to cover it. But for now, you can make due with this, which references the sections in the textbook. Each time unit in the following chart corresponds to 50 minutes.

Topics and Allotted Times

Section	Topics	Suggested Periods
12.2	Vectors (omit applications)	1.5
12.3	The Dot Product (omit direction angles and cosines, work)	1.5
12.4	The Cross Product (omit torque)	1.5
12.5	Equations of Lines and Planes	2.5
12.6	Cylinders and Quadric Surfaces (review)	0.5
14.1	Functions of Several Variables	1
14.2	Limits and Continuity (omit computing ϵ- δ, only cover ϵ- δ definition)	2
14.3	Partial Derivatives (omit PDEs)	1.5
14.4	Tangent Planes and Linear Approximations	2
14.5	The Chain Rule	2
14.6	Directional Derivatives and the Gradient Vector	2
14.7	Maximum and Minimum Values	2
15.1	Double Integrals over Rectangles	1.5
15.2	Double Integrals over General Regions	2.5
15.3	Double Integrals in Polar Coordinates	2
15.4	Applications of Double Integrals (omit radius of gyration and probability)	1
15.6	Triple Integrals	3
15.7	Triple Integrals in Cylindrical Coordinates	1
15.8	Triple Integrals in Spherical Coordinates	1
10.1	Curves Defined by Parametric Equations (omit graphing with technology)	2
13.1	Vector Functions and Space Curves (omit using technology)	2
13.2	Derivatives and Integrals of Vector Functions (omit integrals)	0.5
13.3	Arc Length and Curvature (omit curvature, normal and binormal vectors, torsion)	1.5
16.1	Vector Fields	2.5
16.2	Line Integrals	2.5
16.3	The Fundamental Theorem for Line Integrals	2.5
16.4	Green's Theorem	2.5
16.5	Curl and Divergence (vector forms of Green's Theorem)	2
		50

Course Learning Outcomes

After taking this course, the student should be able to:

1. **Model spatial problems with vectors, lines, planes, curves, and surfaces in space.** a, b, c
2. **Differentiate multivariate functions.** a, b
3. **Use differentiation of vector-valued functions to compute tangent lines.** a, b, c
4. **Use differentiation of multivariate functions to find extrema and rates of change.** a, b, c
5. **Set-up and evaluate multiple integrals for regions in the plane and in space.** a, b
6. **Use iterated integrals to measure areas, compute volumes, and find centers of mass.** a, b, c
7. **Compute work and mass integrals on curves and solids, respectively.** a, b, c
8. **State and apply Green's theorem.** a, b, e1, e2
9. **Find and use potential functions to compute work integrals along curves.** a, b, c

Course Assessment Tools

1. **Term average**, based mostly on in-class examinations: 60% of grade.
2. **Comprehensive written final exam**: 40% of grade.

Departmental Learning Outcomes

The mathematics department, in its varied courses, aims to teach students to:

a. **Perform numeric and symbolic computations.**
b. **Construct and apply symbolic and graphical representations of functions.**
c. **Model real-life problems mathematically.**
d. **Use technology appropriately to analyze mathematical problems.**
e. **State (e1) and apply (e2) mathematical definitions and theorems.**
f. **Prove fundamental theorems.**
g. **Construct and present (generally in writing, but occasionally orally) a rigorous mathematical argument.**