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# Math 215: Calculus & Analytic Geometry III

## University of Bridgeport

### Fall 2019

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**Last update November 7<sup>th</sup>. Expect further revisions.**

Welcome to Math 215! Here is some basic but crucial information about the course. Please read it carefully.

#### Contact information

Instructor: Marco Bonett-Matiz      ✉ [MBonettM@Bridgeport.edu](mailto:MBonettM@Bridgeport.edu)

#### Meeting times

Lecture	MW/Th	1:30 - 2:45/2:20 pm	Dana Hall room # 31
Office Hours	T/Th	3 - 4:30 pm	Dana Hall room # 18

#### Textbook

This year, your required course materials have been provided for you. Simply come to the UB Bookstore in the lower level of the Knight's End, show your UB ID and schedule (electronic or print), and walk out with your books! At the end of the semester, simply return the books to the bookstore for the next group of students to use. For students in online courses, please contact the bookstore to ensure your address is up to date so books not in an e-book format can be shipped to the correct address.

#### Course prerequisites

A grade of *C* or better in both Math 110 & 112 (Calculus I&II). Our class makes extensive use of differentiation and integration techniques.

#### Course description (Learning objectives)

Our class will discuss vector calculus and the geometry of space using functions of more than one variable. You will learn methods to calculate partial and directional derivatives, multidimensional and line integrals, extrema of functions of several variables (minima and maxima), and both Stoke's and Divergence theorems. Toward the end you will have a conceptual understanding and geometrical intuition for conservative fields, divergence, and curl. More generally, our class offers you the opportunity to sharpen your critical thinking skills. You will learn a logical and consistent mathematical framework to describe vector fields. In the process, you will practice transferable skills such as problem-solving and quantitative reasoning.

#### In-class etiquette

- **Class dynamics:** Please feel free to ask questions at any time. You should feel free to interject if your contribution will enhance the conversation. Just be mindful and respectful toward your peers and me. Let us discuss in private or via email issues with my presentation, assessment, etc. Destructive behavior will not be tolerated during class time.
- **Laptops, cell phones, etc.:** You are allowed to open your laptop during class, but please seat in the back of the room so that you do not distract the peers behind you. I will not police you on texting, internet usage, sleeping, etc. However, I do ask that if you find yourself spending more than 10% of our time together in activities unrelated to class that you consider alternatives.
- **Tardiness:** Class starts on time. I ask kindly that you refrain from entering if the door is closed. You will be out of sync and entering may distract your peers.

#### Reading assignments and course schedule

Reading assignments included in the Course Schedule are mandatory before the corresponding class. You may find it difficult to follow the in-class discussion if you do not prepare, especially since I assume familiarity with their content. These reading assignments are straight forward which will allow us to emphasize more complex aspects during class.

#### Quizzes

There is a quiz at the beginning of every class that tests your understanding of the previous lecture or the reading assignment. Please work on the problem sets between lectures to prepare for the quizzes; you may find them challenging otherwise. No make-up quizzes will be offered.

The quizzes start sharp at the beginning of class and consist of three multiple-choice for a maximum of three points. You have 6 min for your individual submission, followed by 4 min of peer discussion before resubmission. If the second score is higher one point is added to your initial submission. Nothing happens if your second score is the same or lower than the first.

## Homework policy

- **Deadlines:** Problem sets are posted at the end of the day every Thursday, and are due at the beginning of class on the following Thursday. To help you stay on track I will implement a *strict* deadline policy: Your grade will be docked 10% for each day your homework is late and it will not be accepted after the Monday of the week it is due; *if your homework is not inside the envelope by the time I collect it, your homework is considered late.*

The purpose of this policy is to prevent you guys from falling behind.

- **Collaboration:** Studying collaboratively will help you understand the material better. I strongly encourage you to work in groups when solving the problem sets, preparing for exams, etc. However, you *must* submit only material that reflects your understanding. There is zero tolerance for cheating and/or copying of homework solutions.

Problem sets will be posted on the [Canvas](#) server.

## Exams

Four exams for section 11(12) are schedule for 11 am(1:30 pm) as follows:

- First Exam: TBA.
- Second Exam: TBA.
- Third Exam: TBA.
- Final Exam: TBA.

The exams consist of two main sections: (i) A multiple-choice section with questions similar to the quizzes, and (ii) a main problems section. The problems are similar to homework exercises. The final is not cumulative with the same structure as the exams above.

## Grades

Your course average and letter grade are determined according to:

Participation:	10%	(93, 100] $\rightarrow$ A	(68, 72] $\rightarrow$ C
Quizzes:	15%	(91, 93] $\rightarrow$ A-	(65, 68] $\rightarrow$ C-
Homework:	15%	(86, 91] $\rightarrow$ B+	(64, 65] $\rightarrow$ D+
First exam:	10%	(81, 86] $\rightarrow$ B	(62, 64] $\rightarrow$ D
Second exam:	15%	(76, 81] $\rightarrow$ B-	(59, 62] $\rightarrow$ D-
Third exam:	15%	(72, 76] $\rightarrow$ C+	[0, 59] $\rightarrow$ F
Final:	20%		

The fixed intervals are to prevent competition for grades and I reserve the right to adjust them on your favor.

## Words of advice

Here are some tips that will help you stay on top of the course:

- Come to class on time. Classes are short and dense, so missing the beginning will make it difficult for you to understand the later parts. Also, no make-up quizzes will be given.
- Start early the problem sets and work in groups, they will prepare you for the exams. If you're struggling with a particular concept, try easier exercises to build your confidence before attempting the problem sets.
- Come to my office hours and attend tutoring sessions; I will be happy to discuss anything in as much detail as needed to help you succeed.
- If you find yourself falling behind, ask for additional help and *immediately* put additional time into studying. In this course, every class builds on previous content and falling behind on even one lecture can be very detrimental.
- Ask questions! If something is unclear, you are only helping me and your fellow students when you ask to explain it again. I will be happy to clarify the material and go over anything that is unclear.
- Use the [Anonymous Feedback](#)<sup>1</sup>.

**Please do not hesitate to ask me any questions.**

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<sup>1</sup> Link to anonymous feedback: <https://goo.gl/pmw8dr>