Math 31- Calculus and Analytic Geometry I

Bronx Community College, CUNY

Section E01, Fall 2020

M-W 6:00pm - 8:45 pm, Online (ZOOM)

Instructor: Mehdi Lejmi
Email: mehdi.lejmi@bcc.cuny.edu
Office Phone number: 718-289-5415
Office: CP 319
Office Hours: M, W 4:00pm - 5:00pm or by appointment (ZOOM).

Course Description: This is an introductory undergraduate calculus course. It is a one semester course designed to introduce limits, tangents, continuity, derivatives, rates of change, applications of derivatives, anti-derivatives, area, basic integration techniques and the fundamental theorem of calculus. The topics we will cover are Chapters 1-4 of the text, skipping a few sections along the way. Additional topics will be covered if time permits.

Prerequisites: Students enrolled in this course must have either taken MATH 30 or an equivalent.

Textbook: *Calculus*, by James Stewart, Cengage learning, 8th Edition. ISBN 978-0-53849781-7. Students who do not need MTH33 may use *Single Variable Calculus*, by James Stewart, Cengage Learning, 8th Edition. ISBN 978-1305266636

Classes: We will have meetings at the assigned time online on ZOOM. To join the class please enter the following URL in your browser address:

https://zoom.us/my/math.bcc.lejmi

or

https://zoom.us/j/8479544062

Both are the same room meeting. The meeting ID is 847 954 4062. You can also dial 646-558-8656 and then enter the meeting ID 847 954 4062 to join the class. To access your CUNY ZOOM account, please enter the following URL in your browser address: https://cuny.zoom.us and then login using your CUNYFirst Credentials. If you need any help with ZOOM please email me.

Board: As a board we will use https://awwapp.com. I can always invite you to write on the board.

Calculators: Calculators are NOT permitted for tests, exams and quizzes.

Website: http://bbhosted.cuny.edu

Grading: Homework will be assigned and to be turned in approximately weekly. Please regularly check CUNY Blackboard for announcements regarding Exams/Homework/Quizzes. Homework will be given at the instructor's discretion. Your lowest Homework/quizz will be dropped. Homework assignments will assist in understanding the material but will NOT be sufficient to learn this material well. You should be doing many more problems. There will be two in-class term tests. *No make-up tests will be given.* If you miss a test, you must contact me within 24 hours should you wish to have your absence excused. A doctor's note is needed to justify illness. Any student with a *justified* absence during a test will have his or her *(uncurved)* final exam grade count in place of the missed test. You are responsible for the material in the course readings in addition to any material and announcements made during lecture, regardless of whether or not you were in attendance.

Homeworks	25%
Test 1	20%
Test 2	20%
Final Exam	35%

Office hours: I will be available in our ZOOM meeting room:

https://zoom.us/my/math.bcc.lejmi

or

https://zoom.us/j/8479544062

during the office hours. You can also send me an email for an appointment.

Accommodations/Disabilities: BCC respects and welcomes students of all backgrounds and abilities. In the event you encounter any barrier(s) to full participation in this course due to the impact of a disability, please contact DisAbility Services as soon as possible this semester. A Disability Services specialist will work with you to review the barriers you are experiencing and explain the eligibility process for establishing academic accommodations for this course. You can reach DisAbility Services by email at disabilityservices@bcc.cuny.edu or by phone at 718-289-5874. You may also reach DisAbility Services through Microsoft Teams. Download the Teams app, login using your CUNYfirst login, and join the DSO Student Service Center team using the following access code: neewu66.

Academic Integrity: Academic dishonesty (such as plagiarism and cheating) is prohibited at Bronx Community College and is punishable by penalties, including failing grades, dismissal and expulsion. For additional information and the full policy on Academic Integrity, please consult the BCC College Catalog.

Recording of Remote Classes: Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live."

Resources: Math Tutorial Lab Tutoring Support: Please visit this URL address for informations

http://www.bcc.cuny.edu/academics/academic-departments/mathematics-and-computer-science-department/academic-advising-tutoring-support-services/

Tentative Schedule:

SECTION	TOPIC	SUGGESTED EXERCISES
1.4	The Tangent and Velocity Problems	49 /1,3, 5, 7
1.5	The Limit of a Function	59/ 1-5, 12-14, 17, 23-28
1.6	Calculating Limits Using Limit Laws	69/ 1, 3-23 odd
	Review	95/1-11 odd, 17, 23, 27, 29
2.1	Derivaties	110/ 1, 3, 7, 19-29 odd, 35-43 odd, 47, 51, 53
2.2	The Derivative as a Function	122/1, 3, 4, 7, 19, 20, 21, 25-45 odd
2.3	Differential Formulas	136/1-43 odd, 51, 53, 67, 75
2.4	Derivatives of Trigonometric Functions	146/1-17 odd, 25, 29, 39-47 odd
2.5	The Chain Rule	154/1-45 odd, 47, 51, 55, 69, 71
2.6	Implicit Differentiation	161/1-19 odd, 25, 27, 35, 43, 45
2.7	Rates of Change Applications	173/ 1-9 odd, 15, 18
2.8	Related Rates	180/ 1, 3, 7, 8, 9, 11-31 odd
2.9	Linear Approximations and Differentials	187/1, 3, 5, 7-25 odd, 31
	Review	191/ 3, 5, 11, 13-37, 45, 51, 59, 61, 75, 77, 79, 82
3.1	Maximum and Minimum Values	204/ 3, 5, 15-27 odd, 29-55 odd
3.2	The Mean Value Theorem	212/ 1, 3,7, 9, 11, 15, 19
3.3	Derivatives and Graph Shapes	220/ 1, 5, 7, 8, 9-17 odd, 29-37 odd
3.4	Limits at Infinity; Horizontal Asymptotes	234/ 3, 9-27 odd, 35, 39
3.5	Summary of Curve Sketching	242/ 1-35 odd
3.7	Optimization Problems	256/ 3, 5, 7, 11, 17, 19, 25, 29
3.8	Newton's Method	267/ 5, 7, 13-19 odd, 29
3.9	Antiderivatives	273/ 1-39 odd, 41, 43, 45
	Review	276/ 1-27 odd, 38, 41, 46, 49, 30-57 odd
4.1	Areas and Distances	293/ 1, 3, 5, 13, 15, 19, 23
4.2	The Definite Integral	306/ 3, 5, 9, 17, 21-25 odd, 31, 33, 37
4.3	The Fundamental Theorem of Calculus	318/ 3, 7-35 odd, 41, 45, 49
4.4	Indefinite Integrals	326/ 1-11 odd, 19-41 odd, 55, 57
4.5	The Substitution Rule	335/ 1-29 odd, 35-51 odd
	Review	338/2, 5, 9-27 odd, 33, 35, 37