

City College of CUNY

MATH 21200 GH

Spring 2021

Instructor: Mr. Chun S. Park

Office hours (via Blackboard):

Monday (early afternoon): 2:00PM to 4:00PM

use this link: <https://us.bbcollab.com/guest/c506e42c120a4cb9a52073df685141de>

Wednesday (early afternoon): 2:00PM to 3:00PM

use this link: <https://us.bbcollab.com/guest/d38517662ab940d6a6dce15c08d5e463>

Monday & Wednesday (late afternoon): 4:45PM-5:30PM

Use the link in your Blackboard Collaborate Ultra.

Monday (evening): 8:05PM to 9:30PM

Use the link in your Blackboard Collaborate Ultra

e-mail: [cpark@ccny.cuny.edu](mailto:cpark@ccny.cuny.edu)

Math Dept. web page: <http://math.sci.ccny.cuny.edu>

*This course may employ an online proctoring system for exams, which may require the use of a video camera.*

1. All class lectures will be administered in Blackboard Collaborate Ultra. Make sure to login during the class time which is Mondays & Wednesdays from 6:00PM to 7:40PM. For those who may not have this course added in your Blackboard account use the links below to access the class as a guest (this is temporary, make sure that you have this course added in your Blackboard account before Monday, February 8, 2021.

02/01/2021 <https://us.bbcollab.com/guest/de1fe091f2b74339acdd76b0e16dce54>

02/03/2021 <https://us.bbcollab.com/guest/b22dc0c5264f4c1cb4a8abbbbed00df3c>

2. Text: Thomas' Calculus, Early Transcendentals, 14<sup>th</sup> edition, by Hass, Heil & Weir, 2018, Pearson: If you already have the textbook or Pearson MML access already, you do not have to purchase it again. For If you don't have access to Pearson MML, you will need to purchase it; [ebook & access code: about \$80 Available in Pearson's MyLab page] {Hardcover books cost more, use the link below to see the prices and information on how to purchase at a discounted price} <https://math.sci.ccny.cuny.edu/document/show/7769>
3. I will be using Pearson's MyLab on-line HW and this counts as 10% of your grade (On-line HW must be done by the due date in order to obtain credit). Please see the PDF attachment on how to add yourself into the course created in Pearson MML. The course code in Pearson is **park57723**
4. There will be 2 in class exams; schedule and possible resources from Mr. Park (**available in CCNY Math Dept web page of Mr. Park**) <https://math.sci.ccny.cuny.edu/pages?name=MATH+21200>. This item is located at CCNY Math Dept Web Page [<http://math.sci.ccny.cuny.edu>]

5. The date of your final exam (set by the Scheduling office with the Chairperson advice and possibly might change) it may be as early as Wednesday, May 19, 2021 and as late as Tuesday, May 25, 2021 [officially but you should have 1 additional date just in case]. This means book any getaway plans (if you are going to have it) to start on or after Thursday, May 27, 2021

Grades: Final grade will be composed 25% of each of the in-class exams, 10% of Pearson's MyLab on-line HW and 40% of your final exam. There will be no make up exams.

Grading Scale											
Letter Grade	Passing								Failing		
	A+	A	A-	B+	B	B-	C+	C	C-	D	F
%	97-100	95-96	90-94	87-89	84-86	80-83	77-79	74-76	70-73	60-69	0-59
GPA	4.00	4.00	3.66	3.33	3.00	2.66	2.33	2.00	1.66	1.00	0.00

## Syllabus

### Sections and HW

Section	Topics	Page	Exercises
5.5	Review of Indefinite Integrals	348	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 736, 75, 77, 79
5.6	Review of Definite Integrals	355	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 736, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103
7.1	The Logarithm Defined as an Integral	433	3, 5, 7, 11, 19, 23, 29, 31, 37, 41, 59, 61
7.3	Hyperbolic Functions	451	1, 3, 5, 7, 11, 12, 13, 15, 17, 41, 43, 45, 51, 75, 76, 78
8.1	Using Basic Integration Formulas	465	1, 3, 5, 7, 9, 15, 21, 27, 29, 33, 45, 51
8.2	Integration by Parts	471	5, 7, 9, 11, 13, 21, 23, 25, 27, 29, 31, 33, 39, 41, 47, 49, 51, 57, 64a, 67, 69
8.3	Trigonometric Integrals	479	7, 11, 13, 15, 19, 35, 37, 41, 45, 51, 53
8.4	Trigonometric Substitution	484	1, 5, 9, 11, 17, 19, 23, 31, 35, 39, 43, 45, 51, 53, 57, 58, 59
8.5	Integration of Rational Functions by Partial Fractions	491	3, 5, 11, 13, 15, 16, 25, 27, 31, 33, 35, 39, 41, 55, 59
8.7	Numerical Integration (omit error estimates)	506	3, 5, 9 {trapezoidal & Simpson's rule expansion only}
8.8	Improper Integrals	517	1, 3, 5, 9, 11, 17, 19, 21, 27, 51, 53, 55, 59, 65
10.1	Sequences	586	1, 3, 5, 9, 11, 17, 19, 23, 35, 37, 41, 45, 47, 49, 51, 53, 63, 67, 91, 93, 97, 101, 103, 107, 121, 123, 137
10.2	Infinite Series (omit Ex. 5)	597	1, 5, 7, 9, 13, 17, 19, 21, 23, 27, 31, 33, 35, 39, 45, 47, 53, 57, 65, 69, 79, 81, 83, 89, 97, 100, 103
10.3	The Integral Test (omit error estimates)	604	3, 7, 9, 11, 13, 15, 17, 23, 25, 27, 37, 39, 47, 51, 52, 61, 63, 64

10.4	Comparison Test	610	1, 3, 5, 9, 13, 15, 17, 21, 25, 35, 47, 49, 55, 58, 59, 60, 62
10.5	Absolute Convergence: The Ratio and Root Tests	616	1, 3, 5, 9, 11, 13, 15, 27, 29, 35, 41, 43, 67, 70
10.6	Alternating Series and Conditional Convergence	622	1, 3, 5, 7, 11, 15, 17, 19, 21, 23, 25, 27, 31, 35, 39, 49, 51, 63, 67, 75
10.7	Power Series (omit multiplication of series)	633	5, 9, 11, 13, 15, 21, 29, 31, 37, 41, 53
10.8	Taylor and Maclaurin Series	640	1, 3, 5, 7, 11, 13, 15, 19, 21, 23, 25, 29, 31, 33, 35, 37, 39, 41
10.9	Convergence of Taylor Series (omit Theorem 24)	647	1, 3, 5, 7, 9, 11, 13, 15, 19, 21, 25, 27, 31, 37, 39, 45, 46, 47, 49, 50, 53
10.10	The Binomial Series and Applications of Taylor Series (cover Evaluating Non-elementary integrals only)	655	3, 7, 11, 13, 23, 25, 27, 29, 33, 59, 61, 67, 68
11.1	Parametrizations of Plane Curves	669	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 29, 31, 33, 37, 43
11.3	Polar Coordinates	684	1, 3, 5, 11, 27, 47, 53, 55
12.1	Three-Dimensional Coordinate Systems	717	1, 3, 7, 11, 13, 17, 21, 27, 31, 33, 35, 37, 39, 41, 43, 55, 59, 63, 65, 71
12.2	Vectors (omit applications)	726	3, 5, 9, 11, 13, 15, 17, 19, 21, 25, 27, 29, 31, 33, 35, 41
12.3	The Dot Product (omit work)	734	1, 3, 5, 7, 19, 25, 29, 45
12.4	The Cross Product (omit torque)	741	1, 3, 7, 11, 15, 17, 19, 21, 27, 29, 31
12.5	Lines and Planes in Space	749	3, 7, 9, 17, 19, 21, 23, 25, 27, 29, 31, 35, 41, 45, 47, 51, 57, 59, 61, 67, 71, 75
12.6	Cylinders and Quadric Surfaces	755	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 41, 47
14.1	Functions of Several Variables	812	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 23, 27, 31, 33, 35, 37, 43, 49, 51, 57, 61, 63
14.2	Limits and Continuity in Higher Dimensions (omit computing epsilon-delta, only cover $\epsilon$ - $\delta$ definition)	820	5, 9, 11, 13, 19, 21, 31, 33, 35, 39, 41, 43, 45, 47, 49, 59, 61, 71, 73, 75, 77
14.3	Partial Derivatives	832	1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 23, 25, 27, 29, 31, 33, 35, 37, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 83, 85, 87, 89, 93