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Calculus - This document entails the coursework throughout the semester

Calculus/Differentiation & Integration (Queens College CUNY)



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Math 151 (4 credits)
Calculus/ Differentiation and Integration

Instructor: Jennifer Greenman
Class Meets: Monday-Thursday, 6-8:15 pm, Kiely 319
Office Hours: Monday-Thursday 5-5:40pm, Kiely 239
Email: Jennifer.Greenman@qc.cuny.edu (please do not email Jennifer.Greenman74@qmail.cuny.edu)

Learning Outcomes/Description:

The purpose of this course is the first part of a two-semester sequence (MATH 151 and 152) intended for students who want to study mathematics, physics, chemistry, or engineering. Credit is given for each course satisfactorily completed; a student need not take the entire sequence. Students who want a less rapid introduction to calculus should take MATH 141. Topics include sets, inequalities, straight lines, circles, functions, limits, continuity, the derivative, formulas of differentiation, implicit differentiation, velocity, acceleration, maxima and minima, Rolle's theorem, the mean value theorem, points of inflection, curve sketching, and antiderivatives. Not open to students who are taking any other calculus course or have received credit, including transfer credit or advanced placement credit, for any calculus course. Not open to students who have received either a D or F in MATH 141.

MATH 151 fulfils the following Pathways requirement: MQR

Lectures:

All lectures will be given in person in Kiely 319. If an online transition is needed, we will be having online lecture through Blackboard Collaborate. All recorded lectures can also be found through Blackboard Collaborate.

WebAssign: The course will be using WebAssign for homework assignments. Go to **webassign.net** to access WebAssign. Use the link https://www.getenrolled.com/?courseKey=qc12125209 to get enrolled or manually enter the class key is **qc 1212 5209**. You will need it to gain access to the class. There will be a free few day WebAssign trial at the beginning of the class where homework can be completed without purchasing the access code. WebAssign also comes with an eBook of our textbook.

Text: The required text for this class is *Essential Calculus, Second Edition* by James Stewart; ISBN: 9781337772020. Our textbook can also be found in WebAssign. A physical copy is available for use in the Math Lab and library.

Grading:

Homework	20%
Exam 1	25%
Exam 2	25%
Final Exam	30%

*Your final average will be based solely on the calculated above percentage break-down.

Homework: Homework will be done and graded through WebAssign. You must do the WebAssign homework. Extensions will only be granted with valid reason.

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Exams: There will be two exams and a cumulative final exam. The exams will each count for 25% of the overall grade and the final exam will count for 30% of the overall grade. In the event that a student scores higher on the final exam than a regular exam, I will replace the lowest exam score with the final exam score. (The final will then count for 55% of the overall grade.)

Make-up Policy:

If you have an excused planned conflict (such as medical procedures or religious observances), please contact me at least a week prior to the exam date to schedule a makeup. Likewise, if you missed an exam due to an unexpected event (illness, family emergency, COVID-19), you must contact me immediately.

Calculator: The recommended calculator for this class is the TI-84. Calculators will be allowed on the exams. Calculators which do symbolic differentiation and integration (TI-89,TI-92, TI-NSPIRE) are not permitted on exams.

Tutoring: The MathLab offers free walk in tutoring. Computers and textbooks are also available. It is located in Kiely 331 and the hours of operation are posted on the door. For possible online tutoring, go to https://sites.google.com/view/qc-math-tutoring/home . In addition, I'm always available to help during my office hours.

Reasonable Accommodations for Students with Disabilities:

Students with disabilities needing academic accommodation should register with the Special Services Office by emailing QC.SPSV@qc.cuny.edu. For more information about services available to Queens College students, visit the Office of Special Services website: https://www.qc.cuny.edu/studentlife/services/specialserv/Pages/default.aspx.

Academic Honesty:

The following guidelines should be followed for exams: All exams will not be open notes/textbook unless otherwise stated. There should be no interaction with fellow students or others nearby during an exam. The internet should not be used during an exam. No cellphone use is allowed during an exam.

The following guidelines should be followed for assignments/homework:

You are allowed to receive help for assignments and homework, but the work must still be done individually.

Academic Dishonesty is prohibited in The City University of New York and is punishable by penalties, including failing grades, suspension, and expulsion as provided at https://www.cuny.edu/about/administration/offices/legal-affairs/policies-procedures/academic-integrity-policy/.

Technical Support:

If you require technical help with your Queens College email or CUNYfirst account, please contact the Queens College helpdesk located in the I-Building, Room 151 - (718) 997-4444. Email: helpdesk@qc.cuny.edu.

Tentative Exam Schedule:

The following dates are tentative. There is a possibility of a change in the actual date.

Exam 1: Thursday, July 20th
Exam 2: Tuesday, August 8th
Final Exam: Tuesday, August 15th

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Other Important Dates:

Wednesday, July 26th: Recording/no in-person class
Thursday, July 27th : Recording/ no in-person class

COVID-19 Exposure:

Please check out the following links for the college's policy:
https://www.qc.cuny.edu/covid/

Grading Rubric:

Grade	Numerical Percentage	Value
A+	4.0	97 – 100
A	4.0	93-96
A-	3.7	90-92
B +	3.3	87 – 89
B	3.0	83 – 86
B –	2.7	80 – 82
C +	2.3	77 – 79
C	2.0	73.0 – 76
C –	1.7	70.0 – 72.
D +	1.3	67 – 69
D	1.0	60 – 66
F	0.0	0-59

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Topics:

Chapter 1: Functions and Limits

- 1.1 Functions
- 1.2 A Catalog of Functions
- 1.3 Limit of a Function
- 1.4 Calculating Limits
- 1.5 Continuity
- 1.6 Limits Involving Infinity

Chapter 2: Derivatives

- 2.1 Derivatives and Rates of Change
- 2.2 The Derivative as a Function
- 2.3 Basic Differentiation Formulas
- 2.4 The Product and Quotient Rules
- 2.5 The Chain Rule
- 2.6 Implicit Differentiation
- 2.7 Related Rates
- 2.8 Linear Approximations and Differentials

Chapter 3: Applications of Differentiation

- 3.1 Maximum and Minimum Values
- 3.2 The Mean Value Theorem
- 3.3 Derivatives and the Shapes of Graphs
- 3.4 Curve Sketching
- 3.5 Optimization Problems
- 3.6 (Newton's Method)
- 3.7 Antiderivatives

Chapter 4: Integrals

- 4.1 Areas and Distances
  Appendix B: Sigma Notation
- 4.2 The Definite Integral
- 4.3 Evaluating Definite Integrals
- 4.4 The Fundamental Theorem of Calculus
- 4.5 The Substitution Rule

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