

MATH 2008B

Intermediate Calculus

Winter 2021

Instructor: Dr. S. Melkonian (4279 HP, (613) 520-2600, ext. 2126
melkonian@math.carleton.ca)

Office

Hours: Online, by appointment

Textbook: Multivariable Calculus, 9th edition, by James Stewart, Daniel Clegg, Saleem Watson, CENGAGE

Ebook:

<https://www.cengage.ca/shop/ProductDisplay?storeId=10651&productId=1635561&urlRequestType=Base&langId=-1&catalogId=10052>

Lectures: Asynchronous, posted online, beginning Monday, January 11

Tutorials: Live online, Mondays 10:35-11:25, beginning January 25

Grading: There will be four tests, to be held during the tutorial periods, on the following dates:

Test 1	Monday, February 1
Test 2	Monday, March 1
Test 3	Monday, March 15
Test 4	Monday, April 5

The best three tests will count for 45% of the final grade, and the final examination for 55%. There will be no make-up tests.

Topics: Three-Dimensional Coordinate Systems (12.1)

Vectors (12.2)

The Dot Product (12.3)

The Cross Product (12.4)

Equations of Lines and planes (12.5)

Vector Functions and Space Curves (13.1)

Derivatives and Integrals of Vector Functions (13.2)

Arc Length and Curvature (13.3)

Velocity and Acceleration (13.4)

Functions of Several Variables (14.1)
Cylinders and Quadric Surfaces (12.6)
Limits and Continuity (14.2)
Partial Derivatives (14.3)
The Chain Rule (14.5)
The Gradient, Tangent Planes and Normal Lines (14.6)
Directional Derivatives (14.6)
Linear Approximations (14.4)
Maximum and Minimum Values (14.7)
Lagrange Multipliers (14.8)

Double Integrals (15.1, 15.2)
Change of Variables (15.9)
Double Integrals in Polar Coordinates (15.3)
Applications of Double Integrals (15.4)
Triple Integrals (15.6)
Change of Variables (15.9)
Triple Integrals in Cylindrical Coordinates (15.7)
Triple Integrals in Spherical Coordinates (15.8)

Vector Fields (16.1)
Line Integrals (16.2)
Fundamental Theorem for Line Integrals (16.3)
Green's Theorem (16.4)

Academic Accommodation

Pregnancy obligation

Contact me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>.

Religious obligation

Contact me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>.

Academic accommodations for students with disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. PMC website: <https://carleton.ca/pmc>.

Last modified: January 2, 2021, 12:00 AM.