

Instructor: Mike Bolt

Office: North Hall 292

Office Hours: You can be sure to find me Mondays, Tuesdays, Wednesdays, and Fridays from 10:30-11:20am.  
 You are welcome to come at other times, too, or to schedule an appointment.

Email: [mbolt@calvin.edu](mailto:mbolt@calvin.edu)

URL: <http://www.calvin.edu/~mdb7>

course URL: <http://www.calvin.edu/~mdb7/courses/m171/F09/>

Phone: x6-6719

- Class meets M-T-W-F from 1:30-2:20pm in North Hall 276.
- The text is *Essential Calculus: Early Transcendentals* by James Stewart, published by Thomson.

**Sections Covered:**

- 1.1 Functions and Their Representations
- 1.2 A Catalog of Essential Functions
- 1.3 The Limit of a Function
- 1.4 Calculating Limits
- 1.5 Continuity
- 1.6 Limits Involving Infinity
- 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
- 3.1 Exponential Functions
- 3.2 Inverse Functions and Logarithms
- 3.3 Derivatives of Logarithms and Exponential Functions
- 3.5 Inverse Trigonometric Functions
- 3.7 Indeterminate Forms and L'Hospital's Rule
- 4.1 Maximum and Minimum Values
- 4.2 The Mean Value Theorem
- 4.3 Derivatives and the Shapes of Graphs
- 4.4 Curve Sketching
- 4.5 Optimization Problems

- 4.6 Newton's Method
- 4.7 Antiderivatives
- 5.1 Areas and Distances
- 5.2 The Definite Integral
- 5.3 Evaluating Definite Integrals
- 5.4 The Fundamental Theorem of Calculus
- 5.5 The Substitution Rule
- 6.5 Approximate Integration
- 7.1 Areas between curves

- **Test Schedule:** There will be 4 in-class tests on the following days:
  - **Wednesday, September 30**
  - **Friday, October 23**
  - **Wednesday, November 11**
  - **Monday, November 30**

See me in advance if you encounter a conflict with this schedule.

The final exam is common to all sections of Math 171 and is scheduled for **Monday, December 14, at 6:30pm**. The final exam for **Section D** will be in **North Hall 276**.

- **Calculus Help Session:** There is a calculus help session that begins meeting during the second week of classes on M-T-W-Th from 7–9pm in North Hall 251. This is a program run through the office of Student Academic Services—with help from our mathematics majors, they provide help on a drop-in basis.
- You are encouraged to work together on problem sets, but the work you submit must be your own—the usual rules of academic honesty are in effect. Problem sets should be prepared neatly; they should be stapled without fringes or clips.
- You are expected to attend all classes and to submit problem sets on time. Rather than accept late papers, I will replace your lowest two scores on the problem sets with the average of your other scores. I will also replace your lowest test score with the average of your three highest test scores. A running list of problem sets will be maintained on the course webpage. Only the homework and quiz scores will be recorded on Knightvision.

**If for some reason you must miss a class, please notify me by email or voicemail.**

- Your combined score (and course grade) will be determined using

$$100 \text{ points each test} + 200 \text{ final exam} + 150 \text{ homework \& quizzes} = 750 \text{ points total}$$

Any quizzes will be announced during class at least two class periods in advance.

**Calvin College will make reasonable accommodations for persons with documented disabilities. Students should notify the Coordinator of Services for Students with Disabilities located in Student Academic Services. Students should also notify me during the first two weeks of class.**