MATH 2167: CALCULUS
AUTUMN 2013

General Information.

Instructor:	Bart Snapp
Email:	snapp.14@osu.edu
Office:	220 Math Building
Office Hours:	Email me to make an appointment.
Class Webpage:	http://www.math.osu.edu/snapp/2167/
Deadline to Drop:	Friday, September 13th
	Friday, October 25th (W)

Greetings. Welcome to the penultimate course in OSU's mathematics sequence for future middle school mathematics teachers! This is a calculus course that addresses the topics of calculus and how they relate to the middle grades curriculum. It is our hope that the materials you use in this sequence will become important resources in mathematics for you throughout your professional life.

Grading. Your grades will be based on the following:

- 10% for online homework.
- 45% for written homework.
- 45% for exams.

100%–93%	A	89%–87%	B+	79%–77%	C+	69%–67%	D+
92%–90%	A−	86%–83%	B	76%–73%	C	66%–60%	D
		82%–80%	B−	72%–70%	C−	59%–0%	E

You can check your grades at anytime using *Carmen*. Check out:

$$\text{http://carmen.osu.edu/}$$

As grades are posted, you have exactly **2 weeks** from the posting date to notify me concerning any errors or irregularities in *Carmen*.

Online Homework. A selection of problems will be assigned from the website:

$$\text{mooculus.osu.edu}$$

You will either need a either *Gmail* or a *Coursera* account to log in. Regardless, you will need to tell Bart Snapp your username to receive credit.

Written Homework. A modest amount of written homework will be assigned. You will have roughly 1 week to complete 2 problems.

Exams/Final. The first exam is scheduled for Friday, September 27th. The second exam is scheduled for Friday, November 1st.

- The final is on Wednesday, December 11th from 12:00pm–1:45pm.

Extra Credit. A maximum of 6 percentage points can be obtained by making a up to 3 videos (approved by Bart Snapp) teaching a calculus concept. Filming will be coordinated with Bart Snapp.

Students with Disabilities. Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone (614) 292-3307 and VRS (614) 429-1334; webpage:

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`http://www.ods.ohio-state.edu`

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Academic Misconduct Statement. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term academic misconduct includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee. For additional information, see the Code of Student Conduct:

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`http://studentaffairs.osu.edu/resource_csc.asp`

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Tentative Course Overview.
- Review of Functions
- Language and Notation of Derivatives
- Pictures of Derivatives (Graphs)
- Approximating Local Values of Derivatives
- Derivatives as Functions (i.e., Global Values)
- Derivatives of Famous Functions
- Derivatives of Combinations of Functions (Constant multiple, sum, product, quotient)
- Derivatives of Combinations of Functions: Chain Rule
- Applications of Derivatives: Curve Sketching
- Applications of Derivatives: Optimization
- (If there is time, some work with Newtonâ™s Method)
- Language of Definite Integrals
- Approximating Values of Definite Integrals
- Approximating Values of Definite Integrals via Trapezoids
- Approximating Values of Definite Integrals via Parabolas
- Finding Exact Values of Definite Integrals: FTC
- Finding Exact Values of Definite Integrals: Substitution
- Applications of Definite Integrals: Areas Between Curves
- Applications of Definite Integrals: Riemann Sums
- Applications of Definite Integrals: Volumes by Slicing
- Applications of Definite Integrals: Volumes of Revolution
- Applications of Definite Integrals: Length of Curve
- Applications of Definite Integrals: Average Value