

<u>Date</u>	<u>Section</u>	<u>Topic</u>
<b>Sep 5</b>	Ch 1	Functions
10	2.1	Preview of Calculus
12	2.2	Limits - concept
17	2.3	Finding Limits
19	2.4	Continuity
24	3.1	Derivative
26	3.2	Derivative as a Function
<b>Oct 1</b>	3.3	Rules of Differentiation
3	***	*** <b>Test # 1 (Ch. 2)</b> ***
8	3.3	Rules of Differentiation
10	3.4	Derivatives: Rates of Change
15	3.5	Derivatives of Trig Functions
17	3.6	Chain Rule
22	3.8	Implicit Differentiation
24	3.9	Derivative of Exponential & Logarithmic Functions
29	4.1	Related Rates
31	4.2	Linear Approximations / Differentials
<b>### W 5</b>	4.3	Maximum / Minimum Values
<b>Nov 7</b>	***	*** <b>Test # 2 (Ch. 3)</b> ***
12	4.3,4.4	Max/Min; Mean Value Theorem (MVT)
14	4.4,4.5	MVT; Derivatives and Graphs
19	4.6	Limits at Infinity & Asymptotes
21	4.7	Optimization
26	4.8	L'Hospital's Rule
28	4.10	Antiderivatives
<b>Dec 3</b>	5.1	Area
5	5.2	Definite Integral
10	5.3	Fundamental Theorem of Calculus (FTC)
12		Applications of Derivative / Integral / Definite Integral / FTC
<b>*17*</b>		<b>FINAL EXAM (2 hours)</b> [Dec 18 if school is closed on Dec 17]

**FINAL GRADE = 2/3 Class Ave. + 1/3 Final Exam**

**Class Ave:** Mean of Tests and Quizzes, Quiz Ave= 1 test.

**Tests:** Full period (50 minutes), **NO MAKEUPS**. If a test is not taken, the grade for that test is 0.

One test grade may be replaced with a 4 to 5 page paper (See below).

Material covered on test includes material since last exam.

**Quizzes:** Unannounced, **any WEDNESDAY, NO MAKEUPS** If there are 6 or more quizzes,

2 quizzes will be dropped before the average is computed; if less than 6 quizzes, 1 quiz

dropped. Covers material from previous week. If a quiz is not taken, the grade for that quiz is 0.

**FINAL:** Comprehensive; **Date: Dec 17** (Note: If WCC is closed on 12/17, then Final Exam on Dec 18)

**PAPER:** 4-5 pages, typed, double spaced. Subject should be one of the topics covered on the test

to be replaced. For a grade of C, the paper must include 1) a complete description/explanation of the topic with an example and 2) three references. Use citations of the form (author, page) for ALL content new in this course.

For a higher grade, the paper should include such additional information as scientific or social applications, historical development of technique, relationship of the topic to other topics in the course, etc.

Required only if a test is missed. An outline must be submitted prior to writing the paper. See scoring sheet.

**ATTENDANCE:** Absence from class will not affect final grade, except as it effects quiz and test grades.

**ASSIGNMENTS:** All odd problems unless otherwise noted.

**W ### LAST DAY TO WITHDRAW with a W (Mon 11/5) ###** | class is scheduled 11/21 (night before Thanksgiving)

MATH 161: Student Learning Objectives

SLO/Objectives - Upon successful completion, the student will be able to:	This outcome will be <b>measured</b> by one or more of the following instruments (exercises, tools, observations):
SLO1: The student will be able to evaluate finite and infinite limits, one-sided limits, and determine whether a function is continuous.	quizzes, tests, exams, homework, and class presentations.
SLO 2: The student will be able to apply the definition of the derivative to basic functions and determine the equation of a line tangent to a curve at a point on the curve.	quizzes, tests, exams, homework, and class presentations.
SLO3: The student will be able to differentiate polynomials, rational, trigonometric, exponential and other transcendental functions using Product and Quotient Rules.	quizzes, tests, exams, homework, and class presentations.
SLO4: The student will be able to utilize the Chain Rule in differentiating composite functions, the performance of implicit differentiation, and in related rate application problems.	quizzes, tests, exams, homework, and class presentations.
SLO5: The student will be able to find extrema and analyze curves using 1st and 2nd derivative tests, concavity, and in applied optimization problems.	quizzes, tests, exams, homework, and class presentations.
SLO6: The student will be able to evaluate basic antiderivatives and definite integrals to find areas using the Fundamental Theorem of Calculus.	quizzes, tests, exams, homework, and class presentations.

The SUNY General Education (GE) Mathematics requirement are addressed by the objectives above. Upon successful completion, students will demonstrate the ability to:

SUNY GE 1: Interpret and draw inferences from mathematical models such as formulas, graphs, tables and schematics	SLO 1, 2, 4, 5, 6
SUNY GE 2: Represent mathematical information symbolically, visually, numerically and verbally	SLO 1, 2, 3, 4, 5, 6
SUNY GE 3: Employ quantitative methods such as, arithmetic, algebra, geometry, or statistics to solve problems	SLO 1, 2, 3, 4, 5, 6
SUNY GE 4: Estimate and check mathematical results for reasonableness	SLO 1, 2, 4, 6
SUNY GE 5: Recognize the limits of mathematical and statistical methods	SLO 1, 2, 4, 6

**Student Contributions**

- Students are expected to attend every class meeting, arriving on time.
- Cell phones and/or other communication devices should be turned off for the duration of each class meeting.
- Assignments are to be completed on time.
- Students are expected to take all tests and quizzes as scheduled. There are no exemptions for any exams.
- Students should expect to spend a minimum of 2 hours per week outside of class for every hour spent in class.
- Students should comply with the [WCC Student Code of Conduct](#), including: 1) respect for all, 2) no cheating.

I understand that the final date to withdraw from this class is Monday, November 5, 2018. If I need to withdraw after that date, I will need to bring a note to Professor Battaly from the WCC Health Office, explaining the medical need to withdraw.

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Date

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Name