

MATH 111-05 Calculus I, Fall 2016

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General Info: I am **not using Blackboard** for the course. The course homepage is:
<http://www.math.wm.edu/~vinroot/111F16.html>

Text(s): 1) *Single Variable Essential Calculus, Early Transcendentals* by James Stewart (8th Ed.). The W&M Bookstore sells this in loose leaf form which includes the e-Book and a WebAssign access code. The e-Book has very useful videos, and we will use WebAssign later in the semester. The course will cover Sections 2.1 – 5.4 (omit 3.11, 4.6).

2) Online Labs, which will be available at:

<http://www.wm.edu/as/mathematics/undergrad/wheretostart/math111/index.php>

Calculators: Calculators will not be allowed on Quizzes, Tests, or the Final Exam. A calculator could be useful for some Lab or HW problems. You can get away without having a calculator and just use online tools, so a calculator is not required, but purchase one if you like.

Tests and Quizzes: There will be three mid-semester tests: the tentative dates are September 22nd, October 20th, and November 17th. Make-up tests are only given in extreme circumstances such as documented serious illness or personal circumstance. I must review such cases *prior* to the start of the test. During weeks when there is not a test there will be a quiz, given during lab time. These are based on homework problems. There are no make-up quizzes. Your lowest quiz score will be dropped at the end of the semester.

Final Exam: The final exam is a “block” exam taken by all sections of Math 111 from 9am-12 noon on Monday, December 5th. Your final exam score may replace your lowest attempted test score if it is higher.

Homework: There is a list of recommended HW problems from every section that we will cover. Later in the course I will incorporate some of the problems in WebAssign. The only graded problems will be the Lab problems, but if you are able to do all of the HW problems, then you should have no problem in the class.

Labs: The 4th hour of this course is a lab, and takes place in Small Physics Lab 110. You are required to be present at the meeting of your lab section. Each lab assignment must be completed in its entirety by the next lab session (or by Wed on the weeks of Tests). At that time, it is collected and graded by the Teaching Assistant (TA). The lab scores count toward your overall grade for the course. Quizzes are also given during Lab time, on each week when there is not a Test.

Attendance: Regular attendance is critical for your success in this course. If you must miss class, you are expected to get notes and missed material from a fellow student.

Grading: Your final grade is calculated as follows:

Mid-semester Tests	15% each
Quizzes	15%
Labs	15%
Final Exam:	25%

The letter grade is assigned using the scale: A 93-100, A- 90-92, B+ 87-89, B 83-86, B- 80-82, C+ 77-79, C 73-76, C- 70-72, D+ 67-69, D 63-66, D- 60-62, F < 60

Honor Code: Students will uphold William and Mary’s stated honor code as it is written, any infractions will be referred to the Honor Council.

Tentative Syllabus for Math 111, Section 5, Fall 2016:

Week	Class	Section covered	Thursday Labs
1	W Aug 24	Intro, 2.1 Tangent & Velocity	No lab, do online Calc prep test
	F Aug 26	2.2 Limit of a function	
2	M Aug 29	2.3 Limit Laws	Start Lab 1, Quiz 0
	W Aug 31	2.4 Precise Definition of Limit	
3	F Sept 2	2.4 Precise Defn (cont'd)	Turn in Lab 1, Start Lab 2, Quiz 1
	M Sept 5	2.5 Continuity	
	W Sept 7	2.6 Limits involving infinity	
4	F Sept 9	2.7 Intro to Derivatives	Turn in Lab 2, Start Lab 3, Quiz 2
	M Sept 11	2.8 Derivative as a function	
	W Sept 14	3.1 Derivatives of Polys/Exp	
5	F Sept 16	3.2 Product and Quotient Rules	Thurs, Sept 22, 8 AM, Test 1 (2.1-3.2)
	M Sept 19	3.3 Derivatives of Trig funcs.	
	W Sept 21	Review (Turn in Lab 3)	
6	F Sept 23	3.4 Chain Rule	Start Lab 4, Quiz 3
	M Sept 26	3.4 Chain Rule (cont'd)	
	W Sept 28	3.5 Implicit Differentiation	
7	F Sept 30	3.6 Derivatives of Logs	Turn in Lab 4, Start Lab 5, Quiz 4
	M Oct 3	3.7 Natural & Social Sci. Apps	
	W Oct 5	3.8 Exponential Growth/Decay	
8	F Oct 7	3.9 Related Rates	Turn in Lab 5, Start Lab 6, Quiz 5
	M Oct 10	Fall Break	
	W Oct 12	3.10 Linear Approximation	
9	F Oct 14	4.1 Max/Min Values	Thurs, Oct 20, 8 AM, Test 2 (3.3-3.10)
	M Oct 17	4.1 Max/Min Values (cont'd)	
	W Oct 19	Review (Turn in Lab 6)	
10	F Oct 21	4.2 Mean-Value Theorem	Start Lab 7, Quiz 6
	M Oct 24	4.3 Derivatives and Graphing	
	W Oct 26	4.4 Indet. Forms/L'Hospital's Rule	
11	F Oct 28	4.4 Indet. Forms (cont'd)	Turn in Lab 7, Start Lab 9, Quiz 7
	M Oct 31	4.5 Summary of Curve Sketching	
	W Nov 2	4.7 Optimization	
12	F Nov 4	4.7 Optimization (cont'd)	Turn in Lab 9, Start Lab 10, Quiz 8
	M Nov 7	4.9 Antiderivatives	
	W Nov 9	5.1 Areas and Distances	
13	F Nov 11	5.2 The Definite Integral	Thurs, Nov 17, 8 AM, Test 3 (4.1-5.1)
	M Nov 14	5.2 The Definite Integral (cont'd)	
	W Nov 16	Review (Turn in Lab 10)	
14	F Nov 18	5.3 Fundamental Thm of Calc	Start Lab 11, Turn in History Lab
	M Nov 21	5.3 Fund Thm (cont'd)	
	W Nov 23	Thanksgiving Break	
15	F Nov 25	Thanksgiving Break	Cumulative, block final (Location TBA)
	M Nov 28	5.4 Indefinite Integrals	
	W Dec 30	5.4 Net Change Theorem	
	F Dec 2	Review	
EXAM	M Dec 5	Final Exam 9:00 AM-12 noon	