Math 118 - Introductory Calculus   Block 3 Fall 2017

Instructor: Prof. Jan Minton   461 Trexler Hall
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Office Hours: By appointment: Monday & Wednesday 3:30-4:30 and Tuesday & Thursday 2:30-4:30
                            Make appointments online at **jminton.youcanbook.me**

Course Objective: This course provides an introduction to calculus with integrated Pre-calculus review of relevant
topics. Calculus topics include the study of limits, derivatives, and graphing. Pre-calculus topics, which will be presented
and reviewed as they are needed, include factoring, trig functions, exponents and inverse functions. An additional focus of
the course will be the use of technology as a learning aid.

Intended Learning Outcomes:

        ... apply techniques of differentiation to model and solve problems.

        … understand the role of Calculus and the infinitesimal in modern mathematics

        ... calculate, by hand, rudimentary limits and derivatives

        … understand and manipulate various types of functions

        ... recognize the role of technology in Calculus, understand when it should be used, and be aware of its limitations.

Required   **Text:** *Calculus: Early Transcendental Functions*, Smith and Minton, 4th Edition
Materials: **Technology:**   Graphing Calculator
                                Inquire course management system available through MyRoanoke
                                Installation of *Mathematica* software – see course *Inquire* site for instructions

Attendance Policy: Full attendance is expected. Simple attendance is not graded, but graded activity will occur during
                           many class periods. As stated in the Academic Catalog, "Every student is accountable for all work
                           missed because of class absence. Instructors, however, are under no obligation to make special
                           arrangements for students who are absent." Also, anytime you come in late or leave during class you
                           miss part of the course and you disrupt the educational experience for everyone else. Do this only in
                           the case of emergency.

Overall Workload: In addition to the 3 hours of class time, you are expected to work outside of class for a minimum of 9
                           additional hours per week.

Quizzes: **Weekly:** There will be weekly quizzes on recent calculus material. No make-up quizzes will be
                           given, but the lowest quiz grade will be dropped.

                           Algebra: There will be a quiz on Inquire for each Pre-calculus review topic. These quizzes will be
                           available for 24 hours following the in-class review. There will be no make-ups after the quiz closes
                           on Inquire. None of these grades will be dropped.

Preparation: Following each video assignment, there will be a very brief quiz or hand-in assignment. Together these will count as one weekly quiz grade. No make-ups. No drops. The preparation average is not eligible to become the dropped grade in the weekly category.

Mathematica	Throughout the semester we will enhance our study of calculus by doing a series of Mathematica Projects. These projects will introduce you to the software package Mathematica and allow you to take advantage of its graphical and computational capabilities to reinforce your understanding of calculus.
Assignments:	Practice problems will be assigned regularly from the textbook. For the most part these will not be graded for correctness, but it is important that you do these exercises in a timely fashion so that you can monitor your own progress. Bring your work (right or wrong) to every class meeting. In class from time to time I will look at your work and assign a grade of 0 = no effort, 1 = satisfactory effort on some problems, 2 = satisfactory effort on all problems. In most cases simply writing a final answer will not be considered satisfactory effort. The average of these results will count as a weekly quiz. This effort average is not eligible to become the dropped grade in the weekly category.
	You are expected to watch and learn from all video lessons posted by the instructor. These video lessons will make it possible to use class time for student activities.
Tests/Exams:	There will be four tests and a final exam as indicated on the day by day course schedule. Make-up tests will be given only under *very* extenuating circumstances that prohibit you from physically appearing in the classroom.
Co-curricular Involvement:	The Math, Computer Science and Physics department offers a series of discussions that appeal to a broad range of interests related to these fields of study. These co-curricular sessions will engage the community to think about ongoing research, novel applications and other issues that face our discipline. There is a link to the dates and times for these sessions on *Inquire*.
	Members of this class are invited to attend all appropriate meetings; however participation in **at least two** of these sessions is mandatory. A response form is available on Inquire. Within one week of attendance, students must submit this completed form to the instructor. These two scores will count in the Preparation Quiz category.
Academic Integrity And Electronic Devices:	The college policy is fully supported. All tests and quizzes will be closed book and closed notes unless otherwise indicated.
	The use of any electronic device during a quiz or exam is strictly prohibited. Exceptions may be made regarding the use of calculators or computers. Cell phones are never permitted. **Any use of a non-approved device during a quiz or exam will be considered a breach of academic integrity.**
Grading:	Weights for the various components of the course and final course letter grade assignments are given below:

Algebra Quizzes	10%	A 93-100	B- 80-82	D+ 67-69
Weekly Quizzes	15%	A- 90-92	C+ 77-79	D 63-66

Mathematica Projects	15%		B+ 87-89	C 73-76	D- 60-62
Tests (10% each)	40%		B 83-86	C- 70-72	F below 60
Final Exam	20%				

IMPORTANT TO NOTE:

The Inquire gradebook will be used for grade STORAGE only. Inquire will not be used to calculate your official course average. Any averages you might see in Inquire for this course should not be trusted.

Material, content, and scheduling are subject to change if deemed appropriate or necessary by the instructor.

Math 118 Schedule
Fall 2017

		Weekly	Day	Date	Topic	Quiz	Mathematica
W	Aug 30	1.1					
F	Sept 1	1.2					
M	Sept 4	Intro to Mathematica					Project 1
W	Sept 6	1.3 (with Alg. Review)				Q1	
F	Sept 8	1.3/1.4					
M	Sept 11	1.4					
W	Sept 13	1.5				Q2	Project 2

F Sept 15 1.5   M Sept 18 Review

		Weekly	Day	Date	Topic	Quiz	Mathematica
W	Sept 20	**Test 1**					
F	Sept 22	1.6 (with Alg. Review)					
M	Sept 25	1.6/2.1					
W	Sept 27	2.1 (with Alg. Review)				Q3	
F	Sept 29	Motion Detector					Project 3
M	Oct 2	2.2 (with Alg. Review)					
W	Oct 4	2.2				Q4	Project 4
F	Oct 6	2.3 (with Alg. Review)					
M	Oct 9	2.3					
W	Oct 11	Review					
F	Oct 13	**Test 2**					
		Fall Break					
M	Oct 23	2.4 (with Alg. Review)					
W	Oct 25	2.4/2.5					Project 5
F	Oct 27	2.5					
M	Oct 30	Workshop Day					
W	Nov 1	2.6 (with Alg. Review)				Q5	
F	Nov 3	2.6					Project 6
M	Nov 6	2.7 (with Alg. Review)					

W Nov 8 2.7 Q6 F Nov 10 Review

		Weekly	Day	Date	Topic	Quiz	Mathematica
M	Nov 13	**Test 3**					
W	Nov 15	2.8 (with Alg. Review)					
F	Nov 17	2.8/2.10					Project 7
M	Nov 20	2.10				Q7	
		Thanksgiving					
M	Nov 27	3.1 (with Alg. Review)					
W	Nov 29	3.1/3.2					Project 8
F	Dec 1	3.2				Q8	
M	Dec 4	Review					
W	Dec 6	**Test 4**					
F	Dec 8	Review					

Wed   Dec 13   8:30-11:30   **FINAL EXAM**