Math 170 B   Analytic Geometry and Calculus I   Fall 2010
Instructor: Fred Schultheis
Office: PPHAC 218
Office Hours: MW 12:00 - 1:00 pm, and by appointment
Phone: 610-625-7887
Required Text: Single Variable Calculus: Early Transcendentals , James Stewart, sixth edition.
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After a brief review of some algebra and analytic geometry, we will study 4 of the basic concepts of calculus. One may think of calculus as the mathematics of infinite quantities and to deal with infinite things mathematically one uses the concept of a limit. The concept of limit is central to all of calculus. The other 3 concepts; continuity, differentiation and integration are very important, special cases of limits. The review material is contained in Chapter 1 and some of the appendices. The calculus that we will cover is contained in Chapters 2-5.

Course Description
The course meets MWF from 8:55 to 10:05 in PPHAC 232. Homework assignments will be given at each class meeting. Students are expected to complete these assignments by the next class meeting, where they will be discussed. No one can learn mathematics without doing it themselves and so, to the student, homework is the most important part of the course. Since class participation is important, students are expected to attend every class.

Course Goals
In this course you will be learning the rudiments of the mathematics of change. Upon completing the course, successful students will be able to work with functions algebraically, graphically, and numerically, and use them to model problems, understand the derivative conceptually as well as know how to calculate derivatives using the various techniques studied in class, improve their communication and technical writing skills by discussing mathematical problems and presenting solutions in written and oral form.

Grading

Your final grade will be based on weekly quizzes and class assignments/participation (20%), 2 hourly exams (30%), 3 labs (10%), 2 proficiency exams, 1 on limits (5%) and 1 on derivatives (10%) and a comprehensive final exam (25%). The following grading scale is used for assigning your final grade.

		$86-89$	$B+$	$76-79$	$C+$	$66-69$	$D+$	≤ 59	F
$93-100$	A	$83-85$	B	$73-75$	C	$63-65$	D		
$90-92$	$A-$	$80-82$	$B-$	$70-72$	$C-$	$60-62$	$D-$		

Attendance:

Regular attendance is necessary in order to be most successful. Poor attendance will affect a student's class participation grade. You will lose 20% from your class participation grade for each unexcused absence. If you are sleeping in class, you are not there. If you feel the need to leave class before it is over, even if you come back, you are not there. In other words, in any of these cases you will be considered absent and will lose 20% of your class participation grade.

Proficiency Exams

There are two skill proficiency exams, a limit skills test and a derivative skills test. The exams will be given in class, without the use of calculators. You must score at least 80% to pass the exam. If you score 80% or more you get that grade, otherwise you get a 0. You may retake them outside of class within a month of the in-class exam. Your highest grade (80% or above) will be recorded.

The following dates are approximate and subject to minor fluctuations:

8-Sep	LAB 1: Slopes and Instantaneous Change
15-Sep	LAB 1 due
17-Sep	LAB 2: The Definition of the Limit
24-Sep	Limit proficiency test
27-Sep	Lab 2 due
8-Oct	FIRST EXAM
22-Oct	LAB 2′: Newton's Method Last day to retake limit test
27-Oct	LAB 2′ due
29-Oct	Derivative proficiency test
22-Nov	SECOND EXAM
29-Nov	LAB 4: Computing Areas
1-Dec	Last day to retake derivative test
6-Dec	LAB 4 due
15-Dec	Final Exam (Wednesday, 8:30 am)

Technology

A graphing calculator is required and the TI-83 is highly recommended. Students with different graphing calculators bear the responsibility of making it emulate the TI-83.

Learning Disability Accommodations

Students who have documented learning disabilities and wish to request accommodations for this class should contact the Learning Services Department. Accommodations cannot be provided unless official documentation is received from the appropriate campus office.

ACADEMIC HONESTY POLICY GUIDELINES
MATHEMATICS COURSES

The Mathematics and Computer Science Department supports and is governed by the Academic Honesty Policy of Moravian College as stated in the Moravian College Student Handbook. The following statements will help clarify the policies of members of the Mathematics faculty.

In all homework assignments which are to be graded, you may use your class notes and any books or library sources. When you use the ideas or thoughts of others, however, you must acknowledge the source. For graded homework assignments, you may not use a solution manual or the help, orally or in written form, of an individual other than your instructor. If you receive help from anyone other than your instructor or if you fail to reference your sources you will be violating the Academic Honesty Policy of Moravian College. For homework which is not to be graded, if you choose, you may work with your fellow students. You are responsible for understanding and being able to explain the solution of all assigned problems, both graded and ungraded. All in-class or take-home tests and quizzes are to be completed by you alone without the aid of books, study sheets, or formula sheets unless specifically allowed by your instructor for a particular test.