Math 108A, B: Functions and Derivatives with Applications
Fall 2015

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Office Hours: MWF 12:30- 1:10 pm and by appointment
Required text: Calculus: For Business, Economics, Life Sciences, and
Social Sciences, by Barnnett, Ziegler and Byleen, 13th edition

Course Goals:

This course is designed to develop the calculus concepts that will benefit
those students interested in the business and social sciences. The approach
used will be especially useful for students who need to study calculus but would
beneit by a review of necessary pre-calculus topics. 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 knowing 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.

Course Description

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.

Grading:

Your .final grade will be based on
4 quizzes, 25 points each   (100 points)
Homework assignments/participation (100 points),
3 hourly exams, 100 points each   (300 points)
Comprehensive final exam   (200 points)
Attendance and effort will be considered when determining course grade.
The following grading scale is used when assigning your .final grade.

93 - 100 A	87 - 89 B+	77 - 79 C+	67 - 69 D+	0 _ 59 F
90- 92 A-	83 - 86 B	73 - 76 C	63 - 66 D	
	80 - 82 B-	70 - 72 C-	60 - 62 D-	

The final exam schedule is listed on AMOS on college's website.

Attendance:

Regular attendance is necessary in order to be most successful. Poor attendance will affect a student's
class participation grade. You will lose 10% 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 10% of your class participation grade.

There will be no make-ups for missed quizzes. Make-up tests are given only in extreme cases. Only one make up test is allowed.

If a student has to miss a test it is the student's responsibility to contact the instructor as early as possible.

If you are going to be absent on a given day, **especially** a day when a quiz or a test will be administered or when a quiz is due, you must contact me before that class time (i.e. via email, phone, prior notice, note in my mailbox) and excuse yourself, otherwise you will receive a **zero** for that quiz or test. Late notices will also have the same consequences.

In case of advanced notification you *can* make-up a test ; however on my terms. I will select a time for you to make up the missed test. Failure to make the time I selected, a grade of zero will be assigned. It is best to make it to class to avoid any frustration. Only one make up test allowed during the semester

class Structure: Class will consist of lecture, group work, individual work, and problem sessions. Please come to class prepared with you text, notes, and calculator everyday. Please be prepared to participate in class. Class will start promptly at the start time, and class will not end early. Please turn off your cell phones prior to the start of class
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Attendance: Attendance will be taken everyday. There is a very strong correlation between attendance and grades. In order to understand the material, you need to be present in class. Group work also requires every ones participation. I understand that there are circumstances that you must miss class so the lowest homework grade will be dropped when computing the final grade. Remember that no late homework is accepted.

Academic Honesty: For graded homework assignments and projects, you may use your class notes and any books or library sources except a solutions manual.
Any resources you use must be documented at the top of the homework assignment.
As an example if you get help from the Tutor Center for problem 4 only, please write "Help with problem 4 from Tutor Center". No points will be deducted for honestly acknowledging help.
However if you do not document any appropriate resource this is considered cheating. The College academic honesty policy appears in your Student Handbook; you are expected to be familiar with it. The Academic Honesty Policy Guidelines specific to mathematics classes are reiterated at the end of the syllabus. They apply to work done outside of class as well as to in-class quizzes and tests. Please read them carefully. If you are unsure about the propriety of a particular procedure or approach, please consult with your instructor before continuing with the assignment.

Learning Disability Statement : Students who wish to request accommodations in this class for a disability should contact the Academic Support Center, located on the first floor of Monocacy Hall (extension 1401). Accommodations cannot be provided until authorization is received from the Academic Support Center.
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 More information may be found at P:\acdean\OCR Language.doc

Academic Honesty Policy Guidelines
Mathematics Courses

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

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 thought 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.

Note: This syllabus is a guideline for the course. It may be necessary to make changes during the semester. I will announce any changes in class.

Math 108 Tentative Assigned Problems

Week	Topic	Section	Problems
1	Chapter 1 Function and graphs	1.1 1.2 1.3	1-9 odd,17,31 5-15 odd, 27,29,33, 1-33 odd 51, 65
2	Functions and :Graphs	1.4 1.5 1.6 Quiz 1	33,35,53-69odd,73,75,91 9-17 odd,29,31-39 odd 1- 21 odd 43.45
3	Chapter 2 Limits and the derivatives	2.1, 2.2	1-25 odd,39,41,47, 49,55,57 9-25 odd ,31-43 odd
4	Continuity	2.3 TEST 1 chapters 1, 2.1 ,-2.3	7-31 odd, 35-41 odd
5	The Derivative Basic Differentiation Properties	2.4 2.5	3,7,9,11,27,29, 31-39 1-17odd, 25- 45odd,49,51,53,55, 81
6	Marginal Analysis in Business and Economics	2.7	1,3,5,7,11,13,15, 17, 19, 27, 29, 33, 35, 37, 43,45
7	Exponential Functions Logarithmic Functions	Quiz 2 Review	
8	Chapter 3 The Constant e and Continuous Compound Interest Derivatives of Exponential and log functions	3.1 3.2	1,3,5,7,9,17,19 21odd,27, 28, 29
9	Derivatives of Products and Quotients The Chain Rule	3.3 Quiz 3 3.4	1-25 odd, 39,45,73,83 17-47 odd, 51, 55- 69 odd
10	Implicit Differentiation Elasticity of Demand	3.5 3.7	1-11 odd.17,19, 29 1-5, 9, 13, 19, 23, 25,29, 31,35,37
11 12	Chapter 4 First Derivatives and graphs	Test 2 chapter 2.4-2.7 and chapter 3 4.1	1-8, 11, 13, 15, 17, 19, 21,27,33, 35, 47, 49, 51

		4.2	1-21 odd, 25, 31-43 odd, 47, 49, 51, 55-61 odd
	Second Derivatives and Graphs		
	L.Hopital's Rule	4.3	1-33 odd
		Quiz 4	
13	Curve Sketching Techniques	4.4	4, 5, 11, 27, 45, 49, 51
	Absolute Maxima and Minima	4.5	7-17 odd, 21, 25, 33, 37, 41
	Optimization	4.6	1-13 odd,17,19,21, 23.25
14	Review for final	Test 3 Chapter 4	HW assignments will be given in class
15	Final Exam	Check AMOS for exact date	