

Math 108 Functions and Derivatives with Applications

Spring 2011

Class Meetings: Monday, Wednesday, and Friday, 8:55 a.m.– 10:05 a.m., PPHAC 233

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Office hours: Monday, Wednesday, and Friday, 2 p.m. to 3:30 p.m. and by appointment.

Course Goals: This course is designed to develop calculus concepts that will benefit students interested in the business and social sciences while providing substantial review of precalculus topics. The course includes the use of a graphing calculator to enhance the student's understanding of the concepts presented.

Upon successful completion of this course you will

- be able to work with functions algebraically, graphically, and numerically and use them to model problems.
- understand the derivative conceptually and be able to calculate derivatives
- be able to use derivatives to solve applied problems involving optimization and rates of change
- be able to use a graphing calculator as a tool in solving problems

Textbook: *Calculus for Business, Economics, Life Sciences and Social Sciences*, 12th edition, by Barnett, Ziegler and Byleen, Prentice Hall, 2011

Graphing Calculator: You are expected to have a graphing calculator and bring it to class. We recommend the TI-83 or TI 84, but any comparable graphing calculator with which you are familiar with is acceptable. Instructions will be given for the TI 83/84 calculators.

Course Content: We will cover most of chapters 1 through 5 of the textbook. Topics include: Functions and Graphs, Linear Equations and Graphs, Limits and the Derivative, Rules of Differentiation, Graphing and Optimization.

Homework Assignments: Daily reading and exercises from the text will be assigned. To keep up with the course material, it is important that you prepare for each class by completing each day's assignment. You should keep a notebook in which you write your solutions to the homework problems. It is essential that you write all the steps in the solutions, and not just the answer.

Quizzes:

Open-notebook quizzes: Instead of collecting homework, at the beginning of most classes, I will ask you to re-write the solution to two or three homework problems, using only your notebook.

Closed-notes quizzes: Several (six or seven) announced twenty-minutes quizzes will be given throughout the semester. The quizzes will include questions on the reading assignments as well as problems similar to the exercises assigned for homework.

Exams and Proficiency Tests: There will be three in-class exams and a comprehensive final exam. The dates of the in-class exams are: **Friday, February 11 - Friday, March 18 - Wednesday, April 13**

The final exam for this class is scheduled for **Tuesday, May 3 at 8:30 a. m.**

Grading: Your grade in this course will be determined as follows:

Class participation	10%
Quizzes	20%
Exams	45% (15% each)
Final Exam	25%

Attendance: Class attendance is required. You are responsible for all work covered in class and all assignments, even if absent from class. If you must miss more than one class due to illness or emergency, you should notify the instructor. Also, common courtesy demands that you be on time and do not leave the room during class (unless you are ill.) In-class exams must be taken at the announced time; make-up exams will be given only in case of extreme emergency or serious illness. There will be no make-up quizzes.

Help: You are encouraged to see Dr. Sevilla during office hours or to arrange an appointment for extra help when needed. In addition, student tutors are available for assistance Monday through Thursday evenings every week. There is no charge for this help. Tutors may not help take-home quizzes, or any other graded work.

Accommodations: Students who wish to request accommodations in this class for a disability should contact Mr. Joseph Kempfer, Assistant Director of Learning Services for Disability Support, 1307 Main Street (extension 1510). Accommodations cannot be provided until authorization is received from the office of Learning Services.

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.*

The following **Academic Honesty Policy Guidelines** are to be followed. Please read them carefully.

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 you instructor for a particular test.