Math 171  Analytic Geometry and Calculus II  
Spring 2005  
Instructor: Kay B. Somers  
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Office hours: Monday, Wednesday and Friday, 10:15 to 11:15 p.m.; Wednesday, 1:30 to 2:30 p.m.; and by appointment or when you find me in my office.


Goals: In this course you will continue learning the rudiments of the mathematical language of change. In particular you will build on the differentiation methods and concepts and the concepts of integration studied in Analytic Geometry and Calculus I. You will continue to work with functions graphically, algebraically and numerically. You will also continue to develop skills in applying these methods to real world problems and discussing and presenting solutions to mathematical problems in written and oral form.

Topics: This course is a continuation of Analytic Geometry and Calculus I, and has as a prerequisite the successful completion of that course. The topics to be covered are:

- Review of the definite integral and Fundamental Theorem of Calculus
- Applications of integration
- Approximation of definite integrals
- Introduction to differential equations
- Parametric equations and polar coordinates
- Introduction to infinite sequences and series

We will review chapter 5; the rest of the material will be drawn from chapters 6, 7, 8, and selected sections of chapters 9, 10, and 11.

Format, attendance, participation, and organization: We will work together in class to build on your understanding of calculus. Reading and practice problem assignments will be made during each class and usually will be discussed during the next class. You are encouraged to work together on these practice homework assignments. In order to support and encourage your work on these problems, I will sometimes ask you to rewrite a particular homework problem’s solution from the day’s assignment or find an example or answer a question based on the homework, for me to grade. You will be permitted to use your notes but not your text to answer these questions.

Some days we will work in class on a Maple lab activity or project. There will usually be a hand-in assignment associated with the lab activity/project, to be completed by the next class meeting (or later). These assignments are to be done individually unless otherwise noted in writing.

Since calculus is a cumulative subject, it is extremely difficult to catch up if you get behind, so attendance in class is required. In addition, some of the concepts will be demonstrated through class activities done in small groups during class. In order to participate, you must be in class.
Warning: This course will involve an interactive classroom, with significant participation expected on your part.

You are also responsible for obtaining all class handouts and keeping them organized. A three-ring binder or folder for the course, with sections for class notes, handouts, quizzes and tests will be very helpful. Students should inform the instructor of any unavoidable absence in advance, if possible. Make-up exams will be given only in the case of a documented illness.

Exams and quizzes: There will be regular announced short quizzes and three hour exams. Hour exams must be taken at the announced time; make-up exams will be given only in the case of a documented illness or emergency. No make-up quizzes will be given and no late graded homework will be accepted. The hour exams will be given on the following dates:
- Wednesday, February 9
- Friday, March 18
- Monday, April 18

Recognized standards of honesty are part of the foundation on which the integrity of an academic institution rests. Accordingly, the Moravian College Faculty adopted a statement on Academic Honesty, the standards of which will be strictly applied in this course. You are encouraged to read carefully the description of this policy that is printed in your Student Handbook, and the Mathematics Department’s clarification below. Any student who is unsure about the propriety of a given procedure or approach for completing assigned work in this course should consult with the instructor before completing the assignment.

Technology: We will use graphing calculators (the TI-83 is recommended) in class to illustrate concepts and solve problems on a regular basis. You are expected to bring a graphing calculator to class. We will also use the computer program Maple, which is on the campus network, for lab activities. Unless otherwise directed, you are encouraged to use Maple and/or your graphing calculator as a resource for homework. There will be some activities and quizzes which will be “no technology” activities. For these you will be required to put away all technology aids. (You will be told in advance if a quiz will be “no technology”.) Except for specific “no technology” times, you may use your graphing calculator during quizzes and exams.

Grading: Your course grade will be based on graded lab activities and projects (14%), quizzes (14%), three hour exams (14% each), a cumulative final exam (20%) and daily graded problems/class participation (10%).

Classroom etiquette: You need to come to class prepared. This means that you have carefully read the assigned material, you have worked (seriously) on the assigned problems and you have your notebook, your textbook, and your calculator with you. You are ready to ask and answer questions in class and to work with your classmates on any in-class group activities. This classroom needs to be a place where everyone feels comfortable asking and answering questions; you are expected to treat everyone in class with respect. You need to turn off your cell phone and any other electronic devices (except calculators, of course) and put them away during class. Finally, you are expected to be on time for class, to stay until class is over and not leave the class unless there is an emergency. (It is very disruptive to everyone, but especially to your instructor, to have people walking in and out of the classroom.)
**Extra help:** There will be time during each class for questions. You are encouraged to ask questions in class and to e-mail questions to Dr. Somers or come for extra help during office hours or at another mutually convenient time, as needed.

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**Academic Honesty Policy Guidelines**  
**Mathematics Department**

The Mathematics 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 Department faculty.

In all homework assignments that 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 any 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 that 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.