Math 124 C Calculus and Analytic Geometry 1 Fall 2006

ADMINISTRATIVE INFORMATION

Instructor: Kris Kissel
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Phone: (253) 833 - 9111 Ext. 4506
Office: SMT 331
Office Hours: Daily 10:00-10:50 a.m. and by appointment

Class Meeting Time: Daily 11:00-11:50 a.m.
Class Meeting Place: SMT 340

Class Web Site: www.instruction.greenriver.edu/kkissel/124Cfall2006

Exams: Friday, October 27 (Exam #1)
       Wednesday, November 22 (Exam #2)
       Thursday, December 14 (Final Exam)

Prerequisite: Math 104 or 106 with a grade of 2.0 or higher,
              or appropriate placement, or instructor’s permission.

Calculator: A graphing calculator is required for this course.
COURSE DESCRIPTION

First course of a four-quarter calculus sequence is an introduction to differential calculus and related applications. Topics include limits, derivatives of algebraic and transcendental functions, optimization, linearization, numerical methods and modelling.

CALCULATOR

A graphing calculator is required for this course. I will be using the TI-83+ calculator for class demonstrations. I recommend a TI-83, TI-83+, or TI-84. If you buy another calculator, I will not be able to assist you with it’s use, and you’ll be expected to learn how to use it entirely on your own.

CLASS FORMAT

We will use all of the following in this course: lectures, exams, quizzes, in-class activities and student presentations. Students will also submit homework for grading.

Attendance is very important! Since there are no make-ups for missed work, your grade will be affected by absences. I expect you to be here and to be on time each day. Please make a decision today as to whether you can fulfill this obligation.

WORK OUTSIDE CLASS

I will assign homework for you to submit for grading, but it will only be a portion of what I think you need to do to learn the material. I will also assign practice problems that you will not turn in, but I strongly suggest that you do them anyway – it will make a big difference in your performance.

“Over the phone” work sessions or outside study groups are strongly encouraged. (Part of what I want you to learn in this course is how to communicate with mathematics effectively, in both written and verbal modes.) Plan on getting together with your group on a regular basis!

BEHAVIOR

Absolutely no cheating or plagiarism will be tolerated in this class. A grade of zero on the assignment or a failing grade in the class will be awarded.

Respect of all others in this class is a necessity. Please refer to the GRCC Student Code of Conduct for rules governing appropriate classroom behavior.

Behavior that disrupts the class, or that is distracting to students or instructor, is not allowed.

ADA STATEMENT

If you believe you qualify for course adaptations or special accommodations under the Americans With Disabilities Act, it is your responsibility to contact the Disability Support Services Coordinator in the LSC and provide the appropriate documentation. If you have already documented a disability or other condition through the GRCC Disability Support Services Office, which would qualify you for special accommodations, or if you have emergency medical information or special needs I should know about, please notify me during the first week of class. You can reach me by phone at 253-833-9111, x4506. Or, you can schedule an office appointment during my posted office hours or at another mutually determined time. If this location is not convenient for you, we will schedule an
alternative place for the meeting. If you use an alternative medium for communicating, let me
know well in advance of the meeting (at least one week) so that appropriate accommodations can
be arranged.

EVALUATION

Your grade for this course will be based on homework, tests, quizzes and in-class activities.

Exams: You will be given three tests in this class covering Chapters 2 through 4, with each
test covering approximately one chapter of the textbook. There will be no make-up tests except for
reasons of serious illness, religious reasons or issues of grave personal import, and any missed test
will receive a grade of 0. However, if you know that you will miss a test (or any assignment) due to
an emergency, please notify me as soon as possible because sometimes arrangements can be made
ahead of time. The final exam will be given in class on Wednesday, December 14, from 11:00 a.m.
to 1:00 p.m.. The final will be comprehensive.

Homework: You will submit homework at the beginning of class each Tuesday, starting with the
second week, with the following exceptions: homework will be collected on Wednesday, October 25
instead of Tuesday (because there is no class on Monday of that week); there will be no homework
due on Tuesday, November 21 (because you have an exam on Wednesday of that week).

Quizzes: There will be a quiz at the beginning of class each Thursday, starting the second week,
with the following exception: there will be no quiz on Thursday, October 26 (because you have an
exam on Friday that week).

Activities: In-class activities will also count towards your grade. You must be in class to
participate and there will be no way to make up any missed points.

GRADING SYSTEM

The breakdown of your grade by percentage is as follows:

Exam #1, #2, Final Exam 20% each
Homework 15%
Quizzes 10%
In-class Activities 15%

If you wish to take this class “Pass/No-Credit”, you must fill out a form at the Registrar’s
Office. There is a deadline for doing this. If you are planning on taking another math class, you
must receive a 2.0 or above in this class to continue. A “Pass” will not be sufficient to get you into
the next course. Decimal grades reported for this class will range from 4.0 to 0.0. Generally, a
grade of “I” (incomplete) will only be given for emergency situations and only if at least 75% of
the work has been completed with a passing grade. The minimum grades that will be assigned are
as follow:
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LEARNING OBJECTIVES

Students will demonstrate the ability to:

1. Understand the concept of a limit.
2. Find limits of polynomial, rational, trigonometric and transcendental functions.
3. Define continuous functions, recognize points of discontinuity of functions, and describe the behavior of functions in the neighborhood of their discontinuities.
4. Define the derivative of a function and apply that definition to appropriate functions analytically, graphically, and numerically.
5. Know and apply the various rules and techniques of differentiation such as the power, product, quotient and chain rules.
6. Use Newton’s Method to find roots of functions.
7. Find derivatives using implicit differentiation.
8. Sketch graphs of various functions using the derivative.
9. Apply the derivative in appropriate settings, in particular to problems involving position, velocity and acceleration (kinematics), related rates and optimization.
10. Reverse the operation of differentiation using the anti-derivative (if time permits).
11. Understand, interpret and communicate effectively orally and in written form.
12. Work cooperatively in groups by: respecting others’ ways of thinking, having confidence in your own knowledge, sharing information, pooling knowledge, and listening effectively.
13. Develop problem solving skills by: recognizing the applicability of previously learned solutions to new problems, recognizing and applying reverse reasoning (given the answer, what is the question), and developing an individual problem solving strategy.
14. Recognize that problems may have alternative solutions and that alternative techniques may be used to arrive at those solutions.
ASSESSMENT OUTCOMES

The following GRCC Assessment Outcomes are applicable in this course:

Quantitative/Symbolic Reasoning:

1. Student evaluates and interprets information and data.
2. Student recognizes which processes or methods are appropriate for solving a given problem, and correctly implements those processes.
3. Student demonstrates the ability to estimate a solution to a presented problem.
4. Student translates data into formats such as graphs, tables, formulas, and sentences.

Critical Thinking:

1. Student provides reasons for the conclusions they reach and assess the relevance and adequacy of those reasons.
2. Student connects past learning with current topics.