Functions for Middle Level Teachers
Math 264, 5 Credits, Fall 2010

Instructor: Dr. Teri Willard

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Meeting Time: M, Tu, W: 2:00 – 3:25
Meeting Place: Hertz 120
Phone: 963-2142
Office Hours: 11:00 to 11:50 am, Monday–
      Thursday, by appointment,
      or by email!

Text: *Precalculus A Problems–Oriented Approach*, Sixth Edition, David Cohen. We will be covering portions of Chapters 1 through 6 of this textbook.

Supplies: paper, sharp pencils, TI–83 graphing calculator (recommended model – I will base handouts and class work on this model.), a 3-ring binder with 8 divider tabs. Several colored portfolios for turning in certain assignments as described.

Course Description: Prerequisite Math 100C or equivalent. Analyze and create algebraic models of functions on both continuous and discrete systems. Apply function techniques to solve problems. Apply knowledge of functions and of society to communicate concepts of mathematical functions to a diverse group of middle school students.

Student Learning Objectives: Upon successful completion of this course, you will be able to
- identify, explore, analyze, predict, and represent patterns, relations, and functions;
- apply techniques of algebra to linear, quadratic, rational, trigonometric, and exponential functions;
- demonstrate understanding of the relationships of equations and inequalities; including proportional reasoning;
- use mathematical models, including technological tools, to represent and demonstrate understanding of discrete and continuous quantitative relationships;
- analyze the concept of change in various contexts;
- apply the fundamental ideas of discrete mathematics in the formulation and solution of problems arising from math and real-world contexts;
- apply knowledge of functions and society to communicate concepts of mathematical functions to a diverse group of middle school students;
- demonstrate understanding of the historical development of algebra and discrete mathematics.
More detailed objective sheets will be handed out for each chapter.

Work and Assessment: Please remember that organization, neatness, and legibility count! Points will be deducted for late work at the discretion of the instructor.

Homework (**0 formal** points): Expect to read your textbook and do homework daily. Homework will not be picked up, nor will it be graded. However, homework problems may appear conveniently on quizzes and tests. If you need help with homework, arrange for help from me, classmates, or the Math Center.

Project (**40** points): A complete description of this assignment will be handed out at the appropriate time.

<u>History Presentation</u>: (**40** points): A complete description of this assignment will be handed out at the appropriate time.

<u>Lesson Plan/Presentation</u> (**60** points): A complete description of this assignment will be handed out at the appropriate time.

<u>Notebook</u> (**0** points total): This is optional, but I suggest sections labeled Introduction, Information, Handouts, Quizzes/Tests, Project, Lesson Plan, and History.

<u>Quizzes/Daily Grades</u> (**125** points): Each item in this category will be worth 25 points. There will be at least 6 of these scores, which could include: quizzes (in-class or take–home) and special in–class activities or presentations in class (unannounced). At least 1 (one) of the scores in this category will be dropped for a total of 125 points. **Make–up grades are not possible**.

<u>Tests</u> (**350** points): There are **two** tests covering several chapters each and a comprehensive **final**. The first two tests are 100 points each. The final is worth 150 points. Dates will be announced well in advance. Make-up tests will be allowed only for extraordinary circumstances that I **must** know about in advance. You must do your own work on tests. Notes, cell phones, headphones, or similar items will not be allowed during testing situations. Calculators are allowed.

Grades: total points = 615 from above

In order to teach others, you must have a good command of the subject. If you do not understand the material well enough to teach it, both you and your students will suffer. Therefore, your work in this course must be assigned a grade.

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

Attendance and Professionalism

If you are to fully benefit from this class, you must attend. As you prepare to become a teacher, you need to become accustomed to setting a good example for students. Attendance demonstrates professionalism and dedication. High quality work and organization demonstrate professionalism, as well.

Academic Honesty

There are times when it is proper to get help from others and times when it is not. Feel free to ask others for help on homework, activities, and take-home quizzes. You can only learn how to do something new by doing it correctly. During in–class quizzes and tests, you must do your own work. Academic dishonesty will not be tolerated during testing situations.

Schedule

I will keep you informed of the schedule and assignments and you can record them on the calendar I will hand out. Keep the calendar in your notebook.

Success

To be successful, you must work hard and **be organized**. I encourage you to form study groups. You must also study regularly, take notes, do your homework, and read the textbook (Read each lesson before you come to class. Most material will be presented in class from a different perspective than the textbook.) You must seek help before you are in trouble and/or too far behind. Never hesitate to ask for help from me, your classmates, or anyone else who can help. I am here to serve you and help you be successful. If you need help, decide what you need help with and write it down. If you are working on a problem unsuccessfully, write down the approaches you have tried. Then seek help with your paper in hand. Write down the helpful hints you receive. Finally, after you successfully complete this course, do not let this be your last course in mathematics. After you join the ranks as a teacher take more courses, attend workshops, read professional journals, attend conferences, and network with other teachers. Successful teachers continually renew themselves.

Additional Note

Students with disabilities who wish to set up academic adjustments in this class should give me a copy of their "Confirmation of Eligibility for Academic Adjustments" from the Disability Support Services Office as soon as possible so we can discuss how the approved adjustments will be implemented in this class. Students without this form should contact the Disability Support Services Office, Bouillon 205, or dssrecept@cwu.edu or 963–2171.

Good Luck in this course! I hope you find it enjoyable and never hesitate to talk to me if you have any problems.

Don't skip class! We meet only 3 times per week for 5 credits.