

Math 180 - Elementary Functions – Fall 2008

MWRF 8:00 - 8:50 MRC 436

Instructor:

Diane Overturf, M.S.

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Office Hours: MWRF 9:00-9:50. Other times can be arranged by appointment.

Additional help:

Individual help is also available in the Learning Center located in MRC 332. You can sign up for free tutoring. Math Drop-in Homework Help hours: M-F 9-9:50 a.m.

Text:

Required: Precalculus: Functions and Graphs, eleventh edition by Swokowski and Cole

Optional: Student's Solutions Manual for the text listed above. Although this is not required, I strongly recommend purchasing it.

Course Catalog Description:

Topics include polynomial, exponential, logarithmic, and trigonometric functions and an introduction to vectors and analytic geometry.

Core Skill Objectives:

1. Communication Skills
 - Writes competently within the major and for a variety of purposes and audiences.
 - Reads with comprehension and the ability to analyze and evaluate.
 - Speaks effectively, both formally and informally.
 - Listens with an open mind and responds with respect.
 - Accesses information and communicates using current technology.
2. Thinking Skills
 - Uses reasoned standards in solving problems and presenting arguments.
 - Applies the skills of planning, monitoring and evaluating.
3. Life Values
 - Analyzes, evaluates and responds to ethical issues from an informed personal value system.
4. Aesthetic Skills
 - Develops an aesthetic sensitivity.
5. Cultural Skills
 - Participates in activities that broaden the student's customary way of thinking.

Course Objectives:

1. Communication Skills
 - Use graphs to represent mathematical behavior.
 - Model problems from geometry and other disciplines using function concepts.
2. Thinking Skills
 - Gain a better understanding of the concept of function.
 - Represent quantitative relationships arithmetically, symbolically, geometrically and graphically.
 - Utilize transformation of functions to obtain new functions (translation, rotation, reflection, dilation).
 - Understand the structure of the real numbers
 - Uses a problem-solving approach to investigate and understand mathematical content.
 - Justifies answers with logic and sound reasoning.
3. Life Values
 - Adheres to the Academic Honesty Policy.
4. Aesthetic Skills
 - Develops an appreciation for symmetry.
5. Cultural Skills
 - Understand how knowledge is developed and verified in mathematics.

Course Outline:

Ch 1: Topics from Algebra

Ch 2: Graphs and Functions

Ch 3: Polynomial and Rational Functions

Ch 4: Inverse, Exponential and Logarithmic Functions

Ch 5: The Trigonometric Functions

Ch 6: Analytic Trigonometry

Ch 7: Applications of Trigonometry

Ch 10: Topics from Analytic Geometry

Attendance and Academic Honesty:

Attendance is essential. You are adults and mature enough to realize that in order to succeed in this class it is vital that you be here. If you cannot make it to class and have any questions, contact someone in the class or myself. To make up a missed quiz or exam you must contact me before the start of class.

Tardiness is a disruptive influence on the class and will affect your grade as follows. After 4 times of being tardy, one point will be deducted from your quiz total points for each additional day you are tardy.

You are responsible for all information given during class. Missed quizzes and exams may be made up if and only if you contact me before the quiz or exam and have a legitimate excuse.

Cheating will not be tolerated. First offense will be a zero for the particular work; a second offense will result in an F for the course.

Responsibility:

My responsibility is to help you learn the material in this class through presenting new concepts, modeling the process of solving problems, and challenging you to do your best. I will do this to the best of my ability.

Your responsibility is to be actively engaged in the process of learning through attending class, reading the text, listening attentively, taking notes, practicing the concepts through doing daily assigned homework, asking questions when you need clarification, and seeking outside help when you need it. You will not succeed in this class if you are unwilling to put time into practicing the concepts outside of class. I encourage you to study with others and to seek a tutor if you find the material difficult.

You are responsible for all information and assignments given during class, even if absent.

You are expected to be respectful and considerate. Harassment, swearing, or sexual innuendo will not be tolerated. Do not talk while others are talking. Anyone who cannot control their behavior will be asked to leave the room.

Americans with Disabilities Act:

If you have a diagnosed disability and require services or accommodations for this class, please inform me and Jane Eddy, the disabilities (ADA) coordinator (MRC 332; 796-3194) within 10 days to discuss your needs.

*May your life be like arithmetic
Friends added, enemies subtracted
Joys multiplied and errors divided*

Assessment:

Grading scale: A: 91%-100%, AB: 88%-90%, B: 81%-87%, BC 78%-80%, C: 71%-77%, CD: 68%-70%, D: 61%-67%, F: 60% and below.

Your grade will be based on the following weighted components:

Chapter Exams: (30%)

Assignments: (30%)

Individual and group assignments, for grade, will be given throughout the semester. Group assignments are to be completed as a group. Every member of the group will receive the same grade. If a member of your group is not pulling his/her weight contact me. Any student who does not actively participate in completing group assignments may be asked to complete them alone. Writing Assignments: I will assign a number of related writing projects during the semester. I will collect and grade them twice - at mid-semester and at the end of the semester. Writing Assignments will be graded on accuracy, completeness, thought put into your responses, and writing skills.

Quizzes: (10%)

Quizzes will be given at least once a week, with the possible exception of exam weeks. You will have a quiz the last day of every week (usually Friday). A pop quiz can occur at any time.

Final Exam: (30%)

Your final exam grade will consist of a take home group, open book exam and a comprehensive individual, closed book exam given on Tuesday Dec 9 from 9:50 to 11:50. The two will be combined to form one final exam grade as follows: group exam (1/3), individual exam (2/3).

Late Assignments will be accepted up to three days late. For each day late your grade will be deducted 10 percentage points (one grade level). After three days, a zero will be given for that assignment. Any extra credit assignments will not be accepted late.

Extra Credit assignments may be offered during the semester. Extra credit assignments are not accepted late. Extra Credit is graded on a point for each problem correctly done and the points are added to your quiz scores. Extra Credit will not raise your grade more than one half grade level. I.e. it can raise your grade from a BC to a B but not from a C to a B.

Missed Quizzes and Exams: Missed quizzes and exams may be made up if and only if you contact me before the quiz or exam and have a legitimate excuse.

Schedule:

You are responsible for knowing these dates. Graded assignment due dates will be announced as they are assigned. This schedule may change as we progress through the course. You will be notified of any changes.

Aug 25 – Sep 15	Ch 1, 2
Sep 17	Individual Exam ch 1, 2
Sep 18 – Oct 8	Ch 3, 4
Oct 9	Individual Exam ch 3, 4
Oct 10 – 30	Ch 5
Oct 20	Writing Assignments collected
Oct 31	Individual Exam ch 5
Nov 3 – 19	Ch 6
Nov 20	Individual Exam ch 6
Nov 21 – Dec 3	Ch 7, 10
Dec 3	Writing Assignments collected
Dec 4	Individual Exam ch 7, 10
Dec 5	Group Final Exam In-class work day
Dec 9	Take Home Group Final Exam collected
Dec 9 9:50 – 11:50	Final Exam