Math 180 - Elementary Functions – Spring 2010

MWRF 8:00 - 8:50 MRC 346

Instructor:

Diane Overturf, M.S.
Office: MRC 377 Telephone: 796-3654 Email: droverturf@viterbo.edu
Office Hours: R 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: Mondays: 12:10 – 1 p.m., Tuesdays: 1 – 1:50 p.m., Wednesdays: 11 – 11:50 a.m., Thursdays: 9 – 9:50 a.m., Fridays: 10 – 10:50 a.m.

Text:

Required: Precalculus: Functions and Graphs, eleventh edition by Swokowski and Cole. ISBN 0495108375
Optional: Student's Solutions Manual (ISBN 0495382876) 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 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, and 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%)

All assignments are posted on Blackboard. Hard copies of graded assignments will be given approximately one week before they are due. Practice assignments are given almost every day. These practice assignments are not graded but there is a direct correlation between completing practice assignments and grades earned. 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. Writing Assignments: I will assign a few related writing projects during 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 almost every Friday. A pop quiz can occur at any time. You will be allowed to use a note card with notes for the quizzes.

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 Friday May 14 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. Tuesday counts as one day even though we do not have class. Assignments can be placed in the slot by my door.

Extra Credit assignments may be offered during the semester. Extra credit assignments are not accepted late. 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. A list of all practice assignments can be found on Blackboard under Course Documents.

Jan 18 – Feb 5	Ch 1, 2
Feb 8	**Exam ch 1- 2;** Review Assignment due
Feb 10 – Mar 1	Ch 3-4
Mar 3	**Exam ch 3-4;** Review Assignment due
Mar 4 -29	Ch 5
Mar 15	Writing Assignment #1 Due
Mar 31	**Exam ch 5;** Review Assignment due
Apr 7 – 16	Ch 6
Apr 14	Writing Assignment #2 Due
Apr 19	**Exam ch 6;** Review Assignment due
Apr 21 – May 5	Ch 7&10
May 5	Writing Assignment #3 Due
May 6	**Exam ch 7&10;** Review Assignment due
May 7	Group Final Exam in-class work day
May 14	**Take Home Group Final Exam collected**
May 14 9:50 – 11:50	**Final Exam**