Instructor: Dr. Rui Xu
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Office hours: MWF 10:00 am–11:30 am, MWF 2:00–4:00 pm or by appointment.

Textbook: Precalculus (2nd Edition), by Robert Blitzer

Course Description: This course is a functional approach to algebra. Emphasis will be placed on the study of functions, and their graphs, inequalities, and, linear, quadratic and piece-wise defined, rational, polynomial, exponential and logarithmic functions. Appropriate applications will be included. Credit for this course is not allowed if the student already has credit for a higher-numbered mathematics course.

Topics: Functions and Their Graphs, Polynomial and Rational Functions, Exponential and Logarithmic Equations, and Systems of Equations.

Learning Outcomes: Students should be able to demonstrate:
1. An understanding of how to solve inequalities including absolute value inequalities
2. An understanding the equations of circles and lines and using these to graph
3. An understanding of functions and how to graph functions
4. An understanding of operations on functions including function composition
5. An understanding of polynomial and rational graphs, including intercepts and asymptotes
6. An understanding of how to find the zeros of polynomials and factoring polynomials
7. An understanding of inverse functions and how to find them graphically and algebraically
8. An understanding of the properties of exponential and logarithmic expressions and
9. An understanding of how to solve a system of linear equations

Grading Methods: Grades will be assessed based on a total of 630 points (as shown below), using the standard decade scale: (90–100%=A, 80–89%=B, 70–79%=C, 60–69%=D, below 60%=F).

| Test 1 (Covering Chapter 1) | 100pts |
| Test 2 (Covering Chapter 2) | 100pts |
| Test 3 (Covering Chapter 3) | 100pts |
| Test 4 (Covering Chapter 7) | 80pts |
| Final (Comprehensive) | 150pts |
| Homework | 100pts |
| **Total** | **630pts** |
**Homework & Test policy:** Homework is due every class day except the first day or test days. Late homework is not accepted. Homework may be graded partially or totally. I may grade a specific problem or just look for completeness. I am interested in the solution of problems not just their answers. So you need to show your work in details. Make-up test or homework can only be given for the students who have an authorized University excuse.

**Other Policies:**

1. Class attendance will be taken every class day. You are not allowed to come to class late or to leave early. If you miss class for any reason, it is your responsibility to get the lecture notes from a classmate, read the text, and do the homework. If a student misses more than six days of class, that student will be withdrawn from the course for failure to attend.

2. Pagers or cell phones should be set to an inaudible setting.

3. If you are a person with any kind of disability and anticipate needing any type of accommodation to participate in this class, please let me know and make appropriate arrangements with Disability Services.

**Important Dates:**

- **June 6–7:** Drop/Add and late registration
- **June 29:** Last day to withdraw with a grade of W
- **July 4:** Independence Day Holiday (no class)
- **July 26:** Last day of class
- **July 27:** Reading Day
- **July 29:** Final Exam 10:00 am–12:00 pm

Please note that the homework problems assigned below have been chosen to give you an idea of the range of problems you are expected to be able to work. You are required to do all of the assigned problems and hand in on time. You should do more problems for practice.

- **Section 1.1:** 1,3,5,7,9,13,17,21,27,29,33,35,37,45,47
- **Section 1.2:** 1,3,9,11,15,21,25,35,39,45,53,57,61,63,65
- **Section 1.3:** 1,7,15,19,21,27,31,33,37,41,45,49,53
- **Section 1.4:** 1,3,5,7,9,13,19,21,23,27,37,43,45,49,51,57,71
- **Section 1.5:** 1,3,7,13,15,19,21,23,31,33,35,37,39,42,47,51,53
- **Section 1.6:** 1,7,11,19,27,43
- **Section 1.7:** 1,3,5,15,17,25,29,35,41,49,55,57
- **Section 1.8:** 1,5,9,13,23,27,29,31,33,37
- **Section 2.1:** 1,5,11,17,21,27,31,35,43,49
- **Section 2.2:** 1,3,5,7,9,13,27,35,37
- **Section 2.3:** 3,7,11,13,15,17,19,21,25,27,33,35,43
- **Section 2.4:** 1,5,13,17,25,33,35,39
- **Section 2.5:** 1,3,9,13,15,19,23,25,29,33