**Pittsburg State University**

**MATH 113 - College Algebra**

**Semester, Year and Instructor Name**

**Office Hours**

**Course Syllabus**

Course delivery method: Lecture, discussion, and problem-solving

**Prerequisite:** Grade of "B" or better in MATH 019 Intermediate Algebra or two units of high school algebra.

**Course Description:** This course is designed for the students to learn traditional college algebra concepts and problem solving skills. It should serve to prepare students not only for their higher studies in math but also to use and appreciate the concepts of algebra in day-to-day activities. The topics include operations with algebraic expressions; linear and quadratic functions; graphs of polynomial and rational functions; systems of equations; logarithmic and exponential functions; arithmetic and geometric progressions; permutations and combinations.

Closed to students with credit in MATH 110 College Algebra with Review or MATH 126 Pre-Calculus or MATH 153 Introduction to Analytic Processes, or students with a letter grade of “C” or better in MATH 150 Calculus I.

# Instructional Resources:

# Required: MyMathLab (see accompanying handout)

# Text - *College Algebra* by Robert Blitzer, Fifth Edition, Pearson Prentice Hall, 2010. (optional)

# A tutorial room (223 Yates Hall) is available for your use free of charge. Tutors and their schedules are posted on the door.

**OBJECTIVES:** The student is expected to:

* Review the fundamental concepts of the real numbers and algebraic expressions including rational expressions.
* Use a vocabulary of algebraic terms and symbols.
* Apply problem-solving techniques for linear and quadratic equations and inequalities.
* Demonstrate graphing skills and interpret graphs using algebraic and technological methods.
* Apply skills related to functions and matrices.
* Demonstrate an understanding of exponential and logarithmic functions.
* Apply skills to solve systems of equations.
* Demonstrate an understanding of how the above objectives apply to and can model real world situations in various disciplines.
* Demonstrate an understanding of the processes and results of algebraic transformations.

**Pitt State Pathways:**

**Quantitative/Analytic Methods:** Quantitative literacy and its methods refer to competency in working with numerical data. Students with strong quantitative skills possess the ability to reason and solve problems from a wide array of contexts and everyday life situations. They can create sophisticated arguments supported by objective evidence and can communicate those arguments in a variety of formats (e.g. text, tables, graphs, mathematical equations, etc.) as appropriate. Competency in this element means:

* *Applying* a set of formal tools to interpret, represent, calculate, and analyze quantitative data;
* *Explaining* assumptions and rationale for selecting a mathematical approach to solve a problem;
* *Explaining* assumptions and rationale for selecting a mathematical or formal logical approach to solve a problem;
* *Drawing* and *communicating* conclusions to support decisions

**Assessment:** As a Milestone I PSP course, the student is expected to:

* Apply tools of analysis and communicate results

**Method of Evaluation**:

**Tests**: There will be 4 unit tests plus a comprehensive final exam. These tests will be based on the text, in-class notes, homework, and in-class projects. Your unit tests will be worth **40%** of your final grade. The comprehensive final exam will count **20%** of your final grade and will include questions to assess your ability to apply tools of analysis and communicate results. **Make-up tests will not be given, but one score from an hourly exam will be dropped**. You will have a unit test during the week prior to finals.

**The comprehensive final exam will be Tuesday, Dec. 11th, 4:00 – 5:50 p.m.**

**Quizzes:**  Group projects and pop quizzes will be in-class and **cannot** **be made up**. Pop quizzes/in class projects/board problems will count for **20%** of your final grade.

**Homework:** Homework will be given each class session either on MyMathLab and/or from the textbook. In MyMathLab the "DO HOMEOWORK" button will take you to the actual homework problems, which may be worked and reworked to improve your score. You are free to work more problems than those assigned. Just go to the Study Plan and you can select problems by chapter/section/topic. Work from the Study Plan will not affect your grade. **Homework not done by the due date will be scored as a zero.** Homework will be weighted to count for **20%** of your final grade.

Generally, you should expect to spend at least two hours working outside of class for each hour in class; “homework” includes studying your notes, the text and solving problems.

The final grade will be based on your percentage of total points from the hourly exams, quizzes, homework, and the final.

The grading scale is: 90 - 100% A

 80 - 89% B

 70 - 79% C

 60 - 69% D

 Below 60% F

**Basic Skills Exam:** To receive credit in this course you **MUST** score at least 9 out of 11 correct on a basic skills examination. The skills tested are required for success in the mathematics courses for which this course is a prerequisite. Your score on this test will not be counted in your course grade. You may take the test at times scheduled with your instructor from October 9th or 10th through November 5th (the last day to drop a course). You may retake different versions of the test until you pass the exam. If you have not passed the exam by November 5th, you must either drop the course or else receive a failing grade.

The purposes of this test include; (1) to motivate mastery of basic pencil and paper skills; (2) to indicate a high degree of accuracy in performing basic skills.

\* Academic honesty and integrity policy can be found at <http://www.pittstate.edu/audiences/current-students/policies/rights-and-responsibilities/academic-misconduct.dot>

\* The Syllabi Supplement, a “one-stop” place for students to access up-to-date information about campus resources can be found at <http://www.pittstate.edu/dotAsset/6c552e9b-8c3c-415e-b874-15006b8d85d0.pdf>