

# Math 1050 - College Algebra/Pre-Calculus

Mon, Tue, Wed, Thu 12-1 pm, NIB 107, CRN: 24364

**Instructor:** Brian Stine

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**Office Hours:** Mon & Wed 1–2 pm, Room 134

**Required Text:** *College Algebra* (10<sup>th</sup> edition) by Lial, Hornsby and Schneider

**Prerequisites:** C or better in Math 1010 or 1030, or ACT of 23 or higher

## Course Description

Course fulfills General Education Mathematics requirement for students majoring in Business, Elementary Education, Health Sciences, Science, and other majors. Reviews fundamental algebra; explores polynomial and rational functions; introduces exponential and logarithmic functions and applications; trigonometric functions dealing with graphs, identities, and equations, including inverse functions.

## Course Objectives

All classes in mathematics at Dixie College support the general education goal of the college, and will:

- Require students to perform mathematical processes including fractions, percentages, decimals, proportions/ratios, algebraic equations and/or calculus techniques.
- Provide students with application problems that use a variety of methods including arithmetical, algebraic and geometric methods.
- Challenge students to make inferences from mathematical models that include formulas, graphs and tables.
- Provide students with real-life applications that use a variety of mathematical functions.

Upon successful completion of this course, the students will demonstrate through testing the ability to:

- Apply functional notation.
- Determine symmetries that exist in the graph of an equation.
- Graph polynomial functions and find their intercepts, maxima, and minima.
- Analyze the key components of the graph of polynomial and rational functions.
- Compute the composition and inverses of functions.
- Graph exponential and logarithmic functions.
- Apply properties of logarithms and exponents in simplifying expressions and solving equations.
- Solve systems of linear equations using substitution, elimination, matrices, and Cramer's rule.
- Solve non-linear systems of equations and inequalities.
- Find terms and sums of terms of arithmetic and geometric sequences and series.
- Compute the terms of a binomial expansion.

## Disability Resource Center

If you are a student with a medical, psychological or a learning difference and requesting reasonable academic accommodations due to this disability, you must provide an official request of accommodation to your professor(s) from the Disability Resource Center within the first two weeks of the beginning of classes. Students are to contact the center on the main campus to follow through with, and receive assistance in the documentation process to determine the appropriate accommodations related to their disability. You may call (435) 652-7516 for an appointment and further information regarding the Americans with Disabilities Act (ADA) of 1990 per Section 504 of the Rehabilitation Act of 1973. Our office is located right next to the Testing Center on the bottom floor of the Financial Aid and Career Center building.

## Behavior Policies

Your attendance and behavior are expected to reflect your dedication to excellence as a university student. You are expected to attend class, participate in discussions and group work, and use class time for Math 1050 activities only. You must abide by all regulations set forth in the "Student Rights and Responsibilities Code" (DSC Policy 5.33). In particular, you should be aware of your obligations pertaining to academic performance ("Academic Performance Responsibilities," DSC Policy 5.33.5).

## Homework and Exams

Homework is due daily for full credit. Late homework will be accepted, but only for  $\frac{3}{4}$  credit. Homework will not be graded, but simply marked as pass or fail.

Chapter tests will be taken in the testing center, final exam in the regular classroom. Chapter tests can be taken early. Late tests (taken on or after the first day of class following the test date) will be penalized 10 points.

A calculator will be needed (a graphing calculator is optional).

## Grading

Your final grade will be a weighted calculation as follows: Homework 20%, Tests 60%, Final Exam 20%. Your lowest test score can be replaced by the final exam score.

Your grade will be determined according to the percentage of points you earn in this course. Your semester grade will be based on the following scale: **A**(94-100%), **A-**(90-93%), **B+**(87-89%), **B**(83-86%), **B-**(80-82%), **C+**(75-79%), **C**(70-74%), **C-**(65-69%), **D+**(60-64%), **D**(55-59%), **D-**(50-54%), **F**(0-49%).

## Schedule

|             |             |   |      |             |                                    |
|-------------|-------------|---|------|-------------|------------------------------------|
| 1/9         | Intro       |   | 3/5  | 4.1         | 1-17 ODD, 19-26 ALL, 35-79 EOO, 77 |
| 1/10        | 1.1         | 1-65 EOO, 3,7,35                                      | 3/6  | 4.2         | 1-25 EOO, 49-77 EOO,71,75,83       |
| 1/11        | 1.2         | 1-11 ODD, 15-39 EOO, 17,25                            | 3/7  | 4.3         | 1-29 ODD,59-87 ODD,91              |
| 1/12        | 1.3         | 1-77 EOO, 3,7,83,87                                   | 3/8  | 4.4         | 1-81 EOO, 3,7,47, X49,X57          |
| 1/16        | No Class    |   | 3/12 | No Class    |                                    |
| 1/17        | 1.4         | 1-77 EOO, 3,7,31,67                                   | 3/13 | No Class    |                                    |
| 1/18        | 1.5         | 1-45 EOO  | 3/14 | No Class    |                                    |
| 1/19        | 1.6         | 1-77 EOO,27,93,97                                     | 3/15 | No Class    |                                    |
| 1/23        | 1.7         | 1-53 EOO,39,55-59 ALL,61-77 EOO, 95                   | 3/19 | 4.5         | 1-77 EOO,12,23,39,60,71,75         |
| 1/24        | 1.8         | 1-8 ALL, 9-65 EOO, 27,51,81,85,89                     | 3/20 | 4.6         | 1-4 ALL,5-41 EOO, 20               |
| 1/25        | Review      |   | 3/21 | Review      |                                    |
| <b>1/26</b> | <b>Test</b> | <b>Chapter 1 Test</b>                                 | 3/22 | <b>Test</b> | <b>Chapter 4 Test</b>              |
| 1/30        | 2.1         | 13-57 EOO, X41  | 3/26 | 5.1         | 9-53 EOO,69,73,77                  |
| 1/31        | 2.2         | 3-27 EOO  | 3/27 | 5.3         | 1-45 EOO, 61,63,65,75              |
| 2/1         | 2.3         | 1-13 EOO, 17-22 ALL, 23-83 EOO                        | 3/28 | 5.5         | 1-37 EOO,47,51,55                  |
| 2/2         | 2.4         | 1-6 ALL, 9-21 EOO, 25-28 ALL, 33,39,55, 59-65 ALL     | 3/29 | 5.6         | 1-17 EOO, 29-45 EOO,71,73,75,79,81 |
| 2/6         | 2.5         | 1-4 ALL, 5-57 EOO                                     | 4/2  | 6.1         | 1-41 EOO, 31,39,51,53 X13,X17      |
| 2/7         | 2.6         | 1-10 ALL, 11-47 EOO, 45,49,50                         | 4/3  | 6.2         | 1-25 EOO,15,43,48                  |
| 2/8         | 2.7         | 1-69 EOO, 3,15,31, 67,68, 70, 71,72                   | 4/4  | Review      |                                    |
| 2/8         | 2.8         | 1-85 EOO  | 4/5  | <b>Test</b> | <b>Chapter 5&amp;6 Test</b>        |
| 2/13        | Review      |   | 4/9  | 7.1         | 7-43 EOO, 53-65 EOO, 25,77         |
| 2/14        | Review      |   | 4/10 | 7.2         | 1-61 EOO,23, 69,72,73 X29          |
| 2/15        | Review      |   | 4/11 | 7.3         | 5-41 EOO,57,61,64,65               |
| 2/16        | <b>Test</b> | <b>Chapter 2 Test</b>                                 | 4/12 | 7.4         | 1-45 EOO, 42,47,49                 |
| 2/20        | No class    |   | 4/16 | 7.6         | 1-61 EOO,35,39,55                  |
| 2/21        | 3.1         | 1,3,5-8 ALL,12, 13-25 ODD, 27-46 ALL, 47-59 EOO, X55d | 4/17 | Review      |                                    |
| 2/22        | 3.2         | 1-33 EOO,15,41,43,45                                  | 4/18 | Review      |                                    |
| 2/23        | 3.3         | 5,7,9,17,19,21,27,29,41,43,45,49,63,97,99             | 4/19 | <b>Test</b> | <b>Chapter 7 Test</b>              |
| 2/27        | 3.6         | 1,3, 7-10 ALL,11-39 EOO, 25                           | 4/23 | Review      |                                    |
| 2/28        | Review      |   | 4/24 | Review      |                                    |
| 2/29        | Review      |   | 4/25 | Review      |                                    |
| 3/1         | <b>Test</b> | <b>Chapter 3 Test</b>                                 | 4/26 | Review      |                                    |

Final exam will be on Friday, April 27<sup>th</sup>, at 12:30PM in our classroom.