

# Math 1050 - College Algebra/Pre-Calculus

MTWH, 11:00–11:50 am, NIB 133, CRN: 24363

**Instructor:** Brian Stine

**Phone:** 435-275-2215

**Email:** stine@dixie.edu, 8stines@gmail.com

**Office Hours:** MW 12:00–12:50 pm

**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 1040 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, but will be accepted up to the day of the test for that chapter. You are allowed to bring one "cheat sheet" (a 3 x 5 inch notecard, front and back) to each test (6 notecards for the final exam). You will need to bring a bluebook for each test.

## Grading

Points will be earned as follows: homework will be worth 100 points; 6 tests at 100 points each; comprehensive final exam at 300 points. No make-up exams will be given. 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**(95-100%), **A-**(90-94%), **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

Jan 10	R.4	1-73 EOO, 79-103 EOO	Mar 14	No class	
Jan 11	1.1	1-65 EOO, 3,7	Mar 15	No class	
Jan 12	1.2	1-11 ODD, 15-39 EOO, 17,25	Mar 16	No class	
Jan 13	1.3	1-77 EOO, 3,7,83,87	Mar 17	No class	
Jan 17		No class	Mar 21	4.6	1-4 ALL,5-41 EOO, 20
Jan 18	1.4	1-77 EOO, 3,7,31	Mar 22	Review	
Jan 19	1.5	1-45 EOO, 3,57	<b>Mar 23</b>	<b>Test</b>	<b>Chapter 4 Test</b>
Jan 20	1.6	1-77 EOO,27,93,97	Mar 24	5.1	9-53 EOO,69,73,77
Jan 24	1.7	1-53 EOO, 55-59 ALL, 61-77 EOO, 95	Mar 28	5.3	1-45 EOO, 61,63,65,75
Jan 25	1.8	1-8 ALL, 9-65 EOO, 81,85,89	Mar 29	5.5	1-37 EOO,47,51,55
Jan 26	Review		Mar 30	5.6	1-17 EOO, 29-45 EOO, 71,73,75,79,81
<b>Jan 27</b>	<b>Test</b>	<b>Chapter 1 Test</b>	Mar 31	6.1	1-41 EOO, 31,39,51,53 X13,X17
Jan 31	2.1	13-57 EOO, X41	Apr 4	6.2	1-25 EOO,15,43,48,X33
Feb 1	2.2	3-27 EOO, 37-49 EOO	Apr 5	6.3	1-4,5,9,13,31,35
Feb 2	2.3	1-13 EOO, 17-22 ALL, 23-83 EOO	Apr 6	Review	
Feb 3	2.4	1-6 ALL, 9-21 EOO, 25-28 ALL, 33,39,55, 59-65 ALL	<b>Apr 7</b>	<b>Test</b>	<b>Chapters 5 &amp; 6 Test</b>
Feb 7	2.5	1-4 ALL, 5-57 EOO, 59	Apr 11	7.1	7-43 EOO, 53-65 EOO, 25,77
Feb 8	2.6	1-10 ALL, 11-47 EOO, 45,49,50	Apr 12	7.2	1-61 EOO,23, 69,72,73 X29
Feb 9	2.7	1-69 EOO, 3,15,31, 67,68, 70, 71,72	Apr 13	7.3	5-41 EOO,57,61,64,65
Feb 10	2.8	1-85 EOO	Apr 14	7.4	1-45 EOO, 42,47,49
Feb 14	Review		Apr 18	7.5	1-21 EOO
<b>Feb 15</b>	<b>Test</b>	<b>Chapter 2 Test</b>	Apr 19	7.6	1-61 EOO,35,39,55
Feb 16	3.1	1,3,5-8 ALL,12, 13-25 ODD, 27-46 ALL, 47-59 EOO, X55d	Apr 20	7.7	1-33 EOO, 35
Feb 17	3.2	1-33 EOO,15,41,43,45	Apr 21	Review	
Feb 21		No class	<b>Apr 25</b>	<b>Test</b>	<b>Chapter 7 Test</b>
Feb 22	3.3	5,7,9,17,19,21,27,29,41,43,45,49,63,97,99	Apr 26	Review	
Feb 23	3.4	1-9,15,19-29 ODD, 33-41 EOO	Apr 27	Review	
Feb 24	3.5	9-17,19,21,61,65,67,68,89,91	Apr 28	Review	
Feb 28	3.6	1,3, 7-10 ALL,11-39 EOO, 25	<b>May 2</b>	<b>Final Exam</b>	<b>Final Exam</b>
Mar 1	Review				
<b>Mar 2</b>	<b>Test</b>	<b>Chapter 3 Test</b>			
Mar 3	4.1	1-17 ODD, 19-26 ALL, 35-79 EOO, 77			
Mar 7	4.2	1-25 EOO, 49-77 EOO,71,75,83			
Mar 8	4.3	1-29 ODD,59-87 ODD,91			
Mar 9	4.4	1-81 EOO, 3,7,47,X57			
Mar 10	4.5	1-77 EOO,12,23,39,60,71,75			

Final exam will be on Monday, May 2<sup>nd</sup>, 10:00 AM to noon.