

MATH 1050—College Algebra

Section 09, MTRF, 10:00–10:50 am, NIB 107, CRN: 20384

Spring 2010—4 credits

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Office Hours: MTWR 2:30–5:00 pm

Additional Help: NIB 134 *or* Browning Learning Resource Center

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

Calculator Requirement: You *must* have a graphing calculator. The TI–83 (any version) or TI–84 (any version) is recommended.

Prerequisite: You *must* meet at least one of the following minimum requirements. Moreover, this requirement must have been met within the past two years.

- Passed Math 1010 with a “C” or better.
- Earned ACT math score of 23 or higher.
- Earned a suitable CPT score. [For details on this test, go to <http://new.dixie.edu/math>, click on Q&A, then click on “Which math class should I take?”.]

Course Description

Math 1050 satisfies the mathematics general education requirement. The content of the course basically entails a review of fundamental algebra. Polynomial and rational functions will be explored. An introduction into exponential and logarithmic functions and their applications will be given. The course is a lecture course with homework assignments, tests, and a comprehensive final exam. Successful completion of the course prepares students for Math 1100 or Math 2010. Additionally, Math 1050 is necessary for Utah Teacher Certification.

Course Objectives

All classes in mathematics at Dixie State College of Utah support the general education goals of the college. Each mathematics class 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 Math 1050, a student will demonstrate the ability to:

- Apply functional notation to model real-life mathematical problems
- Solve equations for a variable and find zeros of functions
- Analyze the key components of the graph of polynomial and rational functions
- Correctly use conic sections in appropriate situations
- Find the composition and inverses of functions
- Graph exponential and logarithmic functions
- Apply properties of logarithms and exponents when it is expedient to do so
- Solve systems of equations using substitution, elimination, and matrices
- Compute matrix determinants

- Solve non-linear systems of equations and of inequalities
- Find terms of arithmetic and geometric sequences and series
- Perform binomial expansions
- Solve basic counting and probability problems

Behavior Policies

1. **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 to use class time for Math 1050 activities only.
2. **You must abide by all regulations set forth in the “Student Rights and Responsibilities Code” (DSC Policy 5.33).** These regulations can be found online at <http://www.dixie.edu/humanres/polstu.html> (then click on the link to 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).
3. When completing homework, working together is ok—in fact, I encourage it. However, copying another person’s work is not ok. Furthermore, you should try your very best to do a problem before you look at the solutions manual for help. Most importantly, sharing test information is not ok, and if you’re caught, you’ll receive an “F” for the course.

Homework Policies

The goal of your doing homework should be to gain *understanding* of college-level algebra—above and beyond rote memorization and superficial knowledge of formulas and “facts.” With that in mind, let me present my homework policies:

1. You will read a section from the textbook *before* attending the scheduled lecture about that particular section. After actively participating in the classroom discussion on the section, you will then complete all assigned homework exercises from that section.
2. Each class day is divided into three time periods: first, you will take a *quiz* which is based on homework which has already been considered in class; second, I will *lecture* on the section which you read before coming to that class session; third, you will ask me *questions* about homework problems you have completed. If you are involved in extracurricular activities (such as an athletic team), and one of your scheduled events conflicts with class, it is *your* responsibility to give me advance warning so I can give you an alternate assignment in place of the quiz.
3. Daily quizzes are worth 3 points each. Each quiz is comprised of a single, randomly chosen even problem from the textbook which directly follows an odd problem you had to do for homework. You will receive at least 1 point just for taking the quiz. The other 2 points are earned by completing the problem satisfactorily. (On the first day of class, I will present to you some important guidelines as to what “satisfactorily” means. If you miss the first day of class, please let me know so I can go over these guidelines with you.)
4. Quizzes will be graded in “clumps” comprised of four quizzes each. At the end of the semester, each of your two lowest “clump” scores earned during the semester will be boosted by up to 6 points*. Furthermore, you can receive 5 extra credit points by filling out an online survey

for this course. (I will provide details about this extra credit opportunity when it becomes available.)

Exam Policies

1. **Exams cannot be made up for any reason.** Midterm exams will be administered in the Testing Center, while the final exam will be administered in our regular classroom.
2. You must bring the following items to each midterm exam: (a) #2 pencil (not mechanical); (b) scantron (form no. 882-E); (c) photo ID. Moreover, you are allowed to bring your graphing calculator as well as one “cheat sheet” (8½ by 11 inches, front and back) to each midterm exam. **Important:** You should photocopy your cheat sheet before you take the midterm exam for at least two reasons: (i) The Testing Center staff will not allow you to take it with you after you complete the exam, for test integrity purposes; and (ii) You will be allowed to bring your accumulated collection of photocopied midterm exam cheat sheets to the final exam.
3. If you miss a midterm exam, your score on that exam will be extrapolated from the *next* midterm exam (or from the final exam, if necessary). Extrapolated midterm exam scores are subject to an automatic penalty of 30% of the total value of the missed exam.
4. If you miss a second midterm exam or the final exam, you will receive an automatic **zero** for that exam, regardless of excuse.
5. A 10% penalty will be given to any student showing up more than 10 minutes late for the final exam. A 30% penalty will be given to any student missing the exam period by more than an hour. (This is to ensure students do not “hang back” and study longer than their classmates.)

Grading

Quiz “clumps” (12 pts. each*)	129 points
Midterms (50 pts. each)	300 points
Final Exam (<i>comprehensive</i>)	100 points

There are 529 total points possible. Your grade will be determined according to the percentage of points you earn in this course.

≥ 92.0% A	≥ 89.0% A–	≥ 86.0% B+	≥ 82.0% B
≥ 79.0% B–	≥ 75.0% C+	≥ 70.0% C	≥ 67.0% C–
≥ 64.0% D+	≥ 60.0% D	< 60.0% F	

Disability Resource Center

If you are a student with a documented physical or mental impairment that will substantially limit a major life activity, please contact the Disability Resource Center on the main campus. The Center Coordinator and staff will assist you in evaluating your eligibility for services. If you are deemed eligible, reasonable accommodations that are appropriate for your disability will be assigned. If you have any questions concerning this process, please contact the Center at (435) 652–7516 or go to the Student Services Center (located next to the Testing Center).

Website Resources

Library	http://library.dixie.edu/
Writing Center	http://new.dixie.edu/english/dsc_writing_center.php
Testing Center	http://new.dixie.edu/testing/
Tutoring	http://dsc.dixie.edu/tutoring/index.htm

Communication Policy

Important class and college information, including lecture notes, syllabus changes, etc. for this class, will be sent to either the preferred email account you submitted to Dixie State College when you began school here or to your “Dmail” account. This information includes your DSC bill, financial aid and scholarship notices, notification of dropped classes, reminders of important dates and events, and other information critical to your success in this class and at DSC in general. You will be held responsible for any emailed information sent to you by me or by DSC, so please check your email account often. When trying to get in contact with me, the best option is to call my office phone and leave a message. If you are not comfortable with that option, please email me.

My Teaching Philosophy

I believe every dedicated student, including **you**, can learn the material taught in this course. I am confident that learning this material will make a **vital** difference in your ability to apply algebraic reasoning to everyday problems. Learning about mathematics should be **fun!** If we’re not having fun while we learn, we’re not really learning! ☺

* The last clump of quizzes is comprised of only three quizzes and is worth only 9 points. As such, the score you earn on the last clump *cannot* be boosted.

Lecture Schedule

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<u>DATE</u>	<u>QUIZ</u>	<u>LEC.</u>	<u>?s</u>	<u>DATE</u>	<u>QUIZ</u>	<u>LEC.</u>	<u>?s</u>
1/11		Intro		3/8 to			
1/12		1.1	R.3	3/12	Spring Break		
1/14	R.3	1.2	1.1	3/15	4.1	4.3	4.2
1/15	1.1	1.3	1.2	3/16	4.2	4.4	4.3
1/18	Martin Luther King Day			3/18	4.3	4.5	4.4
1/19	1.2	1.4	1.3	3/19	4.4	4.6	4.5
1/21	1.3	1.5	1.4	3/22	4.5	5.1	4.6
1/22	1.4	1.6	1.5	3/23	4.6	–Review–	
1/25	1.5	1.7	1.6	3/25		5.3	5.1
1/26	1.6	1.8	1.7	3/26	5.1	5.2	5.3
1/28	1.7	2.1	1.8	3/29	5.3	5.5	5.2
1/29	1.8	–Review–		3/30	5.2	5.6	5.5
2/1		2.2	2.1	4/1	5.5	6.1	5.6
2/2*	2.1	2.3	2.2	4/2	5.6	6.2	6.1
2/4	2.2	2.4	2.3	4/5	6.1	6.3	6.2
2/5	2.3	2.5	2.4	4/6	6.2	6.4	6.3
2/8	2.4	2.6	2.5	4/8	6.3	–Review–	
2/9	2.5	2.7	2.6	4/9		7.1	
2/11	2.6	2.8	2.7	4/12		7.2	7.1
2/12	2.7	3.1	2.8	4/13	7.1	7.3	7.2
2/15	Presidents Day			4/15	7.2	7.4	7.3
2/16	2.8	–Review–		4/16	7.3	7.6	7.4
2/18	No Math 1050 meeting			4/19	7.4	7.7	7.6
2/19	No Math 1050 meeting			4/20	7.6		7.7
2/22		3.2	3.1	4/22	7.7	–Review–	
2/23	3.1	3.3	3.2	4/23		7.5	
2/25	3.2	3.4	3.3	4/26		–Review–	
2/26	3.3	3.5	3.4	4/27		–Review–	
3/1	3.4	3.6	3.5	4/29		–Review–	
3/2	3.5	4.1	3.6	4/30	No Math 1050 meeting		
3/4	3.6	–Review–					
3/5*		4.2	4.1				

Midterm exams open the class day on which we review the preceding material. They close **two days** later. The final exam will be at 9:30 am on Monday, May 3rd (in class).

* The last day you may drop the class without a “W” appearing on your transcript is Tuesday, February 2nd. The last day you may drop the class is Friday, March 5th. Other important dates on the academic calendar for this semester can be found online at <http://new.dixie.edu/reg/?page=calendar&sid=201020>.

Homework Assignments

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(1) R.3: 11–27 e.o.o., 33–89 e.o.o.

1.1: 1–9 odd, 13–65 e.o.o.

1.2: 1–11 odd, 15–19 odd, 23, 25, 27–39 e.o.o.

1.3: 1–9 odd, 13–77 e.o.o., 83, 87

(2) 1.4: 1–9 odd, 13–29 e.o.o., 31, 33–77 e.o.o.

1.5: 1–5 odd, 9–45 e.o.o., 57

1.6: 1–25 e.o.o., 27, 29–77 e.o.o., 93, 97

1.7: 1–53 e.o.o., 55–59 all, 61–77 e.o.o., 95

(3) 1.8: 1–8 all, 9–65 e.o.o., 81–89 e.o.o.

2.1: 13–37 e.o.o., 45–57 e.o.o.

2.2: 3–27 e.o.o., 37–49 e.o.o.

2.3: 1–13 e.o.o., 17–22 all, 23–83 e.o.o.

(4) 2.4: 1–6 all, 9–21 e.o.o., 25–28 all, 31–55 e.o.o., 59–65 all

2.5: 1–4 all, 5–57 e.o.o., 59(a & b)

2.6: 1–10 all, 11–43 e.o.o., 45–49 odd

2.7: 1–5 odd, 9, 13, 15, 17–29 e.o.o., 31, 33–65 e.o.o., 67–72 all

(5) 2.8: 1–85 e.o.o.

3.1: 1, 3, 5–8 all, 12, 13–25 odd, 28, 30, 37–46 all, 47–59 e.o.o., 67

3.2: 1–13 e.o.o., 15, 17–33 e.o.o., 41–45 odd

3.3: 5–9 odd, 17–21 odd, 27, 49

(6) 3.4: 1–8 all, 21–27 odd, 65–69 odd

3.5: 9–17 all, 19, 21, 29–36 all, 37–45 odd

3.6: 1, 3, 7–10 all, 11–23 e.o.o., 25, 27–39 e.o.o.

4.1: 1–17 odd, 19–26 all, 35–75 e.o.o., 77, 79

(7) 4.2: 1–25 e.o.o., 49–69 e.o.o., 71–77 odd, 83

4.3: 1–29 odd, 59–87 odd, 91

4.4: 1–9 odd, 13–53 e.o.o., 61–81 e.o.o.

4.5: 1–9 e.o.o., 12, 13–21 e.o.o., 23, 25–37 e.o.o., 39, 41–57 e.o.o., 60, 61–69 e.o.o., 71–77 odd

(8) 4.6: 1–4 all, 5–13 e.o.o., 20, 21–41 e.o.o.

5.1: 9–53 e.o.o., 69–77 e.o.o., 87

5.3: 1–45 e.o.o., 61–65 odd, 75

5.2: 9, 15, 17–33 e.o.o., 35, 37, 41, 79

(9) 5.5: 1–37 e.o.o., 47–55 e.o.o.

5.6: 1–17 e.o.o., 29–45 e.o.o., 71–75 odd, 79, 81

6.1: 1–9 e.o.o., 21–29 e.o.o., 31, 33, 37–41 odd, 51, 53

6.2: 1–25 e.o.o., 43

(10) 6.3: 5, 13, 21, 31–39 e.o.o.

7.1: 7–23 e.o.o., 25, 27–43 e.o.o., 53, 57, 73, 77

7.2: 1–21 e.o.o., 23, 25, 33–61 e.o.o., 69, 72, 73

7.3: 5–41 e.o.o., 57, 61, 64, 65

(11) 7.4: 1–41 e.o.o., 42, 45–49 odd

7.6: 1–33 e.o.o., 35–41 odd, 45–53 e.o.o., 55, 57, 61

7.7: 1–33 e.o.o., 35

Remember!

The final exam will be administered in NIB 107 at 9:30 am on Monday, May 3rd.