Math 1314 Syllabus

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Catalog Description:

Complex numbers; solution of equations and inequalities; graphing techniques; functions including polynomial, rational, exponential, and logarithmic; systems of equations; theory of equations, applications of algebra.

Course Objective:

The completer of college algebra should be powerful in the use of mathematical reasoning to solve problems and to apply mathematics in unfamiliar situations. This requires that the student goes beyond the level of memorizing to the deeper-level of understanding the principles. Not only will the student need to know the skills of algebra, but how to synthesize and combine these skills in multi-step applications.

Course Success.

Make time to do **all** your homework between classes, no exceptions. And if you have any difficulties, get help right away. Attend class regularly.

- I will usually be in my office during the following times: Please feel free to drop in or call**.**

M	T	W	R
2:30-4pm	9:30a-12p	2:30-4pm	9:30a-12p

- The college's Learning Assistance Center (**LAC),** which is located on the second floor, offers **free** math tutoring. The math tutoring room is staffed at most times 9a-9p Mon-Thur.
- Intermediate Algebra modules: 10 minute review lectures http://www.brazosport.edu/sites/CurrentStudents/TransitionalEducation/StudySkills/AlgebraLearningModules
- Old classroom lectures: http://www.brazosport.edu/sites/CurrentStudents/Faculty/CherylCooley/Pages/default.aspx

Required Text: *College Algebra*, 8th ed, by Sullivan

Calculators:

Calculators will be used during this course. You need not have a graphing calculator, but you will need a scientific calculator. Calculators not allowed on tests will be any with computer algebra systems, such as the TI-89.

Academic Honesty

BC assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct including academic honesty. The principle of academic honesty is that all work presented by you is yours alone. Academic dishonesty including, but not limited to, cheating, plagiarism, and collusion shall be treated appropriately. Please refer to the BC Student Guide for more information, this is available online at http://www.brazosport.edu.

Attendance Policy:

If you must miss a class, it is your **responsibility** to find out what you've missed and have it ready for the next class meeting. Daily information can be found at https://online.brazosport.edu/

Last Day to withdraw:

If you need to withdraw from this or other classes, you need to fill out the appropriate paperwork with the registrar by Friday, Nov 5.

Grading Policies:

Grades in this course will be assigned based on your performance on tests, quizzes, homework and a cumulative final

Daily Homework. **(5% of total grade)** Homework is an **essential** part of the course. Daily assignments will be given in class. The assignments are meant to make sure that you have mastered all the concepts from a particular section. Check your work with the instructors copy located in the LAC tutor room. You will be required to write out 4 correct homework problems on the board. This will be 5% of your grade. I will choose a few problems from your homework each day and write them on the board. It will be a first come, first served situation. You need to make sure that you understand how to work the problem you put on the board as I, or other students, may ask you individually about some aspects.

Quizzes (10% of total grade)

Quizzes will be given online, in class, and as take-home. There are **no make up** quizzes. If you miss a quiz or quiz deadline, you will receive a zero for that quiz. I will drop your lowest quiz grade at the end of the semester before averaging. Quiz questions will be similar to homework assignments.

Grading:	
Quizzes	10%
Homework	5%
Tests (17.5% each)	70%
Final	15%

Tests (70% of total grade)

We will have 4 tests, each 17.5% of your total grade. Tests will generally cover a chapter or two. A 3" x 5" note card may be used on some tests. If a notecard is allowed, the card must be hand written. All tests must be taken in **pencil**. If you are absent on a test day, you will receive a zero on that test. **Generally, there are no makeup tests.** Your final exam will count as your missed test.

Test Corrections You will want to correct every test to be sure that you understand the material completely. However, you will have **one** opportunity to turn in test corrections or extra points. You can choose from either Test1, Test2, or Test3. You may earn up to ½ of your missed points by completing all corrections **neatly,** in **order,** on a **separate** piece of paper; then stapled to your test. Corrections will be due one week after the test is returned. You may get help with your corrections, but the work must be your own and I may ask you individually about some of the problems.

Final (15% of total grade)

The final exam will be a cumulative test. The material of the whole semester will be covered on this test. The final exam may also be used to take the place of your lowest test grade (or a zero for a missed test).

Student Responsiblilities

Students are expected to fully participate in the course.

- ❖ Come to class and be on time
- ❖ Respect others
- ❖ Be prepared – time management
- ❖ Pay attention
- ❖ Turn in work on time
- ❖ Communicate with instructor and peers

STUDENT LEARNING OUTCOMES

Upon completion of the course, the student will be able to:

1. Perform division with complex numbers.
2. Find all real and complex solutions to a polynomial equation.
3. Solve equations containing radicals.
4. Solve non-linear inequalities.
5. Find the center and radius of a circle given the equation of a circle.
6. State the domain of a function in interval notation.
7. Graph a function using transformations.
8. Find the composition of two functions.
9. Classify a function as one-to-one and find the inverse of that function.
10. Find the slope, intercepts, and graph of a linear function.
11. Compute the vertex and intercepts of a quadratic function and graph.
12. Find the end behavior, intercepts and graph of a polynomial function.
13. Find the domain and graph of an exponential function.
14. Evaluate a log function and state the domain of a log function.
15. Solve exponential and log equations.
16. Apply exponential and log functions to real world situations.

Students with disabilities

BC is committed to providing equal education opportunities to every student. BC offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software to assist students with special needs. Please contact Phil Robertson, Special Populations Counselor, 230-3236 for further information.

Other student services information

- **Library** :

http://www.brazosport.edu/sites/CurrentStudents/Library or 979-230-3310.

- Study skills and tutoring available in the **LAC**

http://www.brazosport.edu/sites/CurrentStudents/LAC or 979-230-3253.

- **IT**

http://www.brazosport.edu/sites/General/InformationTechnology or 979-230-3266.

- Mathematics Department 979.230.3225
- Counseling and Advising 979-230-3040
- Financial Aid 979-230-3294
- Student Activities 979-230-3355

Tuesday		Thursday	
31-Aug	R1, 1.3 Complex Numbers, Quadratic equations	2-Sep	1.4 Non-linear equations; eqs withfractions
7-Sep	1.4 Equations with radicals	9-Sep	Sets 1.5
14-Sep	2.2 Graphing	16-Sep	Functions 3.1
21-Sep	Functions 3.2	23-Sep	Algebra of functions 3.1
28-Sep	Test 1	30-Sep	Misc Functions 3.3/3.4
5-Oct	Graphing 3.5	7-Oct	applications
12-Oct	Linear functions 4.1, equations of lines 2.3	14-Oct	Linear apps / Quadratic Functions 4.2/4.3
19-Oct	Test 2	21-Oct	quadratic applications 4.4
26-Oct	Polynomial Functions 5.1	28-Oct	Inequalities 5.4, 4.5/ Composite Functions 6.1
2-Nov	finish Composites 6.1/Inverse Functions 6.2	4-Nov	finish Inverse Functions 6.2
9-Nov	Test 3	11-Nov	Review R.2, R.8; eqns with exponents 1.4
16-Nov	Finish eqns; Intro to Exp/Log Functions 6.3/6.4	18-Nov	Exp/Log Functions 6.3/6.4
23-Nov	Properties of Logs 6.5	25-Nov	Exp/Log equations 6.6
30-Nov	Applications 6.7/6.8	2-Dec	Applications 6.7/6.8
7-Dec	Test 4	9-Dec	Review
14-Dec	Final	16-Dec	