College Algebra
MAT 172

INSTRUCTOR: Brian F. Kennedy
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REQUIRED TEXT
College Algebra by Beecher, Penna and Bittinger 4th edition, a graphing calculator is also required.

CREDIT: 3 credit hours   **PREREQUISITE:** MAT 137 or equivalent.

COURSE DESCRIPTION
This course is a thorough and rigorous algebra course that strengthens the proficiency with algebraic skills and the conceptual understanding needed to be successful in the Calculus sequence. The topics include: sets, polynomial, exponential, logarithmic and rational functions, rational exponents, conic sections, right triangle trigonometry, matrices, polynomial, exponential, logarithmic and radical equations linear and quadratic inequalities, absolute value equations and inequalities, linear and nonlinear systems.

GRADING POLICY
A student will receive one of the following grades: A, A-, B+, B, B-, C+, C, C-, D+, D, D-, F, I, W, P or Audit. Determination of that grade will be based on the following. Throughout the semester there will be four, 100 point exams (an exam will be announced at least one week prior to its administration). A comprehensive final exam worth 200 points. Quizzes and/or take-home projects throughout the semester totaling 100 points. Your final grade will be computed by totaling all the points earned on the tests, quizzes and projects then dividing that total by the 700 possible points.

Grade Equivalents:	A 93 - 100	B 83 - 86	C 73 - 76	D 63 - 66
	A- 90 - 92	B- 80 - 82	C- 70 - 72	D- 60 - 62
	B+ 87 - 89	C+ 77 - 79	D+ 67 - 69	F 59 or less

Quizzes will be take home or the first 15 minutes of class and cannot be made up. No test can be made up without prior arrangement with the instructor. All makeup tests will take place during final exam week.

COLLEGE WITHDRAWAL POLICY
Course withdrawals are accepted up until the week before classes end. Specific dates are posted in the academic calendar and withdrawal forms are available online or at the Registrar's office. The withdrawal does not have to be signed by the instructor but it is strongly recommended that you speak with your instructor before withdrawing. If you are receiving financial aid you must contact their office for approval before withdrawing. If necessary, you can withdraw over the phone by calling the Registrar's Office at 860-215-9064.

DISABILITIES STATEMENT
If you have a hidden or visible disability which may require classroom or test-taking modifications, please see me as soon as possible. If you have not already done so, please be sure to register with Chris Scarborough.

ACADEMIC INTEGRITY POLICY
All students are expected to demonstrate their knowledge of the material on each quiz and test. Any student caught cheating will receive a zero on that test.

CLASS CANCELATION POLICY
If class is canceled by the instructor a notice will be placed on the classroom door. If time permits, the class will be notified by email.

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Date	Chapters (Sections) covered	Course Outcomes

Date	Chapters (Sections) covered
1/21	1.1 - 1.2
1/26	1.3 - 1.4
1/28	1.5 - 1.6
2/2	2.1 - 2.2
2/4	2.3 - 2.4
2/9	2.4 - 2.5
2/11	Review
2/16	Test #1 Chapters 1, 2
2/18	3.1 - 3.2
2/23	3.2 - 3.3
2/25	3.3 - 3.4
3/1	3.4 - 3.5
3/3	4.1 - 4.2
3/8	4.3 - 4.4
3/10	4.5 - 4.6
3/15	Review
3/17	Test #2 Chapters 3, 4
3/29	5.1 - 5.2
3/31	5.3 - 5.4
4/5	5.5 - 5.6
4/7	Review
4/12	Test #3 Chapter 5
4/14	6.1 - 6.2
4/19	6.2 - 6.3
4/21	7.1 - 7.2
4/26	7.2 - 7.3
4/28	7.3 - 7.4
5/3	Review
5/5	Test #4 Chapters 6, 7
5/10	Review
5/12	Final Exam

Course Outcomes

1. Define Absolute value, find distances on the number line and on the coordinate plane.

2. Simplify expressions with rational exponents, write them in radical form, simplify, combine and rationalize radical expressions.

3. Solve linear and quadratic inequalities, absolute value equations and inequalities, express answers in interval form.

4. Perform operations on complex umbers, conjugates, represent complex numbers graphically.

5. Perform operations on radical expressions, rational exponents and solve radical equations.

6. Find the domain and range of functions, combine functions, identify odd and even functions, graph piece-wise defined functions, find compositions of functions, inverses and transformations of functions.

7. Find the characteristics of polynomial functions, solve polynomial equations, find zeroes and x-intercepts of polynomials, apply the fundamental theorem of algebra, the remainder and factor theorem and analyze end behavior.

8. Graph rational functions, find vertical, horizontal and slant asymptotes.

9. Graph exponential and logarithmic functions, use properties of exponentials and logarithms, solve exponential and logarithmic equations.

10. Solve systems of linear equations in several variables.

11. Find all characteristics of conic sections, write the equations of circles , parabolas, ellipses, hyperbolas in standard form and graph those conic sections.

12. Solve nonlinear systems of equations.

All students are required to maintain an online learning portfolio in Digication that uses the college template.