MAT 044 Algebra Topics

INSTRUCTOR: ________________________________ OFFICE _________________________
EMAIL:   ________________________________ PHONE: _________________________

COURSE DESCRIPTION: MAT 044 Algebra Topics is an algebra course for students who have completed MAT - 040
Algebra for Liberal Arts and whose program of study requires the completion of MAT 160 – Intermediate Algebra. Topics include integral exponents, polynomials, rational expressions, square roots and quadratic equations.

PREREQUISITES: MAT-040 with a grade of C or better

CREDITS/HOURS: 3 credits (non-degree), 3 hours

GEN’L ED COURSE: No

STUDENT LEARNING OUTCOMES:
1. Evaluate arithmetic and algebraic expressions, including exponential expressions, polynomial expressions, rational expressions, and radical expressions.
2. Simplify arithmetic and algebraic expressions, including exponential expressions, polynomial expressions, rational expressions, and radical expressions.
3. Solve equations, including linear, quadratic and absolute value equations.
4. Factor algebraic expressions.

ASSESSMENT MEASURES: Each of the above listed student learning objectives will be assessed by,
1. Homework assignments and quizzes
2. Written examinations
3. Other, as announced by the instructor

TEXT: MyMathLab Code, by Martin-Gay; Pearson. (includes eBOOK)

ELECTRONIC DEVICES: The Department of Mathematics prohibits the use of cell-phones, PDA’s, laptops, headphones, IPODs and other such devices in mathematics classes unless otherwise specified by the grading policy provided by the instructor at the beginning of the semester.

COURSE OF STUDY: Fall 2014.1 – MAT 044
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<tr>
<th>Topic</th>
<th>Sections</th>
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<tbody>
<tr>
<td>Exponents and Polynomials</td>
<td>12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7</td>
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<tr>
<td>Factoring Polynomials</td>
<td>13.1, 13.2, 13.3, 13.4, 13.5, 13.6, A.1</td>
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<tr>
<td>Roots and Radicals</td>
<td>15.1, 15.2, 15.3, 15.4,</td>
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<tr>
<td>Quadratic Equations</td>
<td>16.1, 16.2, 16.3</td>
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CALCULATOR USAGE: A four function calculator is allowed throughout the course.

GRADING POLICY: Refer to the instructor’s grading policy on the course outline distributed during the first class.

- All students must take the departmental final exam. The final will count for 25% of the overall grade, but a student who fails to attain a grade of 55% or better on the Final Exam will be unable to receive a passing grade for the course.
- Tests and Quizzes will account for no less than 60% of the overall grade.
- Grades in the developmental courses will be assigned as follows:
  - A = 90-100%
  - B+ = 86-89%
  - B = 80-85%
  - C+ = 76-79%
  - C = 70-75%
  - F = Below 70%

BCC Attendance Policy:

All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These will be established in writing on the individual course outline. Attendance will be kept by the instructor for administrative and counseling purposes.

Developmental Mathematics Departmental Attendance Policy:

A student who exceeds the allowable maximum number of absences (see chart below) may be given an “E” grade. Note: two late arrivals or two early departures will equal one absence. In summer, classes missed may count as double absences.

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<th>Courses which meet:</th>
<th>Maximum absences:</th>
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<tr>
<td>15-weeks</td>
<td>6 absences allowed</td>
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<tr>
<td>12-weeks</td>
<td>7 absences allowed</td>
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<td>7-weeks</td>
<td>3 absences allowed</td>
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EXTRA HELP:
The Henry and Edith Cerullo Learning Assistance Center (CLAC), L-125, is a source of tutorial assistance in understanding operations of basic mathematics and in problem solving. For an exact schedule, call 201-447-7489.
The Math Walk-In Center, A-113, offers tutorial support in a collaborative setting.
The CLAC at the Meadowlands, Room 202. Tutors are available to aid in the understanding and reinforcement of the course material learned in class. Practice worksheets are available. Hours will be posted on the door. For an exact schedule, call (201) 493-4096 or visit http://www.bergen.edu/current-students/tutoring/testing-and-tutoring-at-the-meadowlands

FACULTY ABSENCE PROCEDURE:
“CLASS CANCELLATIONS” may be found by clicking on “Current Students” followed by “Class Cancellations” on the Bergen Community College website, www.bergen.edu. A list is also posted in a glass case near A-129, the main corridor on the first floor, and in Ender Hall or in the lobby of the Meadowlands Campus. Students may consult these listings before going to class. If a cancelled class is not listed, it should be reported to the Dean’s Office (A-325) or the Adjunct Office (C-100).

Students who require accommodations in accordance with the American with Disabilities Act can request these services from the Office of Specialized services. To learn more about how to apply for services, please visit them at http://www.bergen.edu/oss

The BCC food pantry is available to meet the urgent needs of members of our campus community. The Food Pantry provides non-perishable food items, toiletries, and additional support services in an environment that emphasizes discretion and confidentiality. Anyone needing assistance is encouraged to visit HS-100 (Office of Health Services) Monday through Thursday 9am-9pm. Donations will also be accepted in HS-100.
MODULE 11 Factoring Polynomials
12.3-12.5 Review of Polynomials
12.6 Special Products
12.7 Dividing Polynomials (12.7(a) only)
13.1 The greatest Common Factor (and Grouping);
13.2 Factoring Trinomials of the Form $x^2 + bx + c$
(13.3 Factoring Trinomials of the Type $ax^2 + bx + c$ By Trial and Error) – Optional
13.4 Factoring Trinomials of the Type $ax^2 + bx + c$ by Grouping
13.5 Factoring Perfect Square Trinomials and Difference of Squares
A.1 Factoring Sums and Difference of Cubes
13.6 Solving Quadratic Equations by Factoring

MODULE 12 Rational Expressions and Equations
14.1 Simplifying Rational Expressions
14.2 Multiplying and Dividing Rational Expressions
14.3 Adding and Subtracting with the Same Denominator and Least Common Denominator
14.4 Adding and Subtracting Rational Expressions with Different Denominators
14.5 Solving Equations Containing Rational Expressions
14.6 Rational Equations and Problem Solving

MODULE 13 Roots and Radicals
15.1 Introduction to Radicals
15.2 Simplifying Radicals
15.3 Adding and Subtracting Radicals
15.4 Multiplying and Dividing Radicals (Denominator Containing One Term)

MODULE 14 Quadratic Equations
16.1 Solving Quadratic Equations by the Square Root Method
16.2 Solving Quadratic Equations by the Completing the Square
16.3 Solving Quadratic Equations by the Quadratic Formula
A.3 Absolute Value Equations
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<td>GCF Factoring and Factor by Grouping</td>
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<td>Review</td>
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<td>Week 7</td>
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<td>Sections 14.2</td>
<td>Adding and Subtracting Rational Expressions</td>
<td>Sections 14.3, 14.4</td>
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<td>Week 8</td>
<td>Solving Equations with Rational Expressions</td>
<td>Section 14.5</td>
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<td>Week 9</td>
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<td>Week 10</td>
<td>Introduction to Radicals</td>
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<td>Week 11</td>
<td>Adding and Subtracting Radicals</td>
<td>Section 15.3</td>
<td>Multiplying and Dividing Radicals</td>
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<td>Week 12</td>
<td>Solving Quadratic Equations by the Square Root Method</td>
<td>Section 16.1</td>
<td>Solving Quadratic Equations by Completing the Square</td>
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<td>Week 13</td>
<td>Solving Quadratic Equations by the Quadratic Formula</td>
<td>Section 16.3</td>
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<td>Week 14</td>
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