

# Bossier Parish Community College

## Master Syllabus

**Course Prefix and Number:** MATH 101

**Credit Hours:** 3-3-0

**Course Title:** Applied Algebra for College Students

**Course Prerequisites:** ACT score of 19 or higher, math placement test score or a grade of “C” or higher in MATH 099.

**Textbook(s):** Lial, Hornsby, and McGinnis. Algebra for College Students, 9<sup>th</sup> edition. Pearson 2019. ISBN: 9780135160664

**Calculator:** Scientific calculator (TI30XIIS recommended)

**Course Description:** Topics from algebra involving operations of polynomials; solving linear equations and inequalities; solving absolute value equations and inequalities; understanding of radical expressions; solving quadratic equations; solving systems of equations; rectangular coordinate system and graphs; introduction to functions; graph linear equations and inequalities; graph quadratic equations; and graphing systems of equations and inequalities.

### Learning Outcomes:

At the end of this course, the student will:

- A. solve linear equations and inequalities;
- B. graph linear equations;
- C. solve systems of linear equations;
- D. simplify polynomial expressions;
- E. factor polynomial expressions;
- F. solve quadratic equations; and
- G. graph quadratic equations.

To achieve the learning outcomes, the student will or will be able to:

(The letter designations at the end of each statement refer to the learning outcome(s).)

1. solve linear equations containing parenthesis; (A)
2. solve linear equations containing decimals; (A)
3. solve linear equations containing fractions; (A)
4. evaluate formulas; (A)
5. isolate specific values within formulas; (A)
6. solve linear inequalities; (A)
7. solve compound inequalities; (A)
8. solve absolute value equations; (A)
9. solve absolute value inequalities; (A)
10. graph a linear equation using a t-table, finding x- and y-intercepts, and/or using slope intercept form; (B)
11. compute the slope of a line; (B)
12. compare the slope of parallel and perpendicular lines; (B)
13. write the equation of a line in slope-intercept form; (B)
14. write the equation of a line in standard form; (B)
15. graph a system of linear inequalities; (B)
16. find the domain and range of a linear function; (B)
17. evaluate function notation; (B)

18. determine if a relation is a function; (B)
19. solve a system of linear equations by graphing, addition, and/or substitution; (C)
20. simplify a monomial expression using rules of exponents; (D)
21. add polynomial expressions; (D)
22. subtract polynomial expressions; (D)
23. multiply polynomial expressions; (D)
24. divide a polynomial expression by a monomial; (D)
25. factor using the GCF; (E)
26. factor using the difference of perfect squares; (E)
27. factor trinomial expressions; (E)
28. solve quadratic equations using factoring; (E)
29. simplify square root expressions; (F)
30. simplify square roots of negative numbers; (F)
31. solve quadratic equation using the square root property; (F)
32. solve quadratic equations using the quadratic formula; (F)
33. graph quadratic equations in standard form using vertex point and intercepts; (G) and
34. graph quadratic equations in general form using vertex point and intercepts. (G)

**Course Requirements:** All students are required to take a comprehensive final exam. When this course is taken in an online environment, the department has established a minimum grade of 60% on the final exam required to earn a grade of “C” or higher in the course. If this minimum score is not obtained by the student, then the student shall refer to the policy outlined in the course syllabus which will supersede the course grading scale shown below. All students are required to utilize ProctorU services for the administration of the final exam.

**Course Grading Scale:**

- 90 – 100 = A
- 80 – 89 = B
- 70 – 79 = C
- 60 – 69 = D
- 0 – 59 = F

**Attendance Policy:** The college attendance policy is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>

**Course Fees:** This course is accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, software licenses, certification exams and/or clinical fees.

**Nondiscrimination Statement:** Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

Title VI, Section 504, and ADA Information  
Angie Cao, Student and Disabilities Services Specialist

Student Services, F-254  
6220 East Texas Street  
Bossier City, LA 71111  
Phone: 318-678-6511  
Email: [acao@bpcc.edu](mailto:acao@bpcc.edu)  
Hours: 8:00 a.m. - 4:30 p.m. Monday - Friday, excluding holidays and weekends.

Equity/Compliance Coordinator  
Teri Bashara, Director of Human Resources  
Human Resources Office, A-105  
6220 East Texas Street  
Bossier City, LA 71111  
Phone: 318-678-6056  
Email: [tbashara@bpcc.edu](mailto:tbashara@bpcc.edu)  
Hours: 8:00 a.m. - 4:30 p.m. Monday - Friday, excluding holidays and weekends.