

Bossier Parish Community College

Master Syllabus

Course Prefix & Number: MATH 129

Credit Hours: 3

Course Title: Applied Technical Mathematics

Course Prerequisites: ACT score of 18 or higher, or grade of “C” or higher in MATH 099

Textbook(s): Saunders and Carmen, Mathematics for the Trades: A Guided Approach, 10th edition. Pearson, 2015. ISBN: 9780133347777

Course Description: This course covers a practical application of basic math/algebra skills to typical industrial applications and problems. There is an emphasis on units of measure, algebraic expressions, reading tools of measurement, perimeter/area/volume analysis using plane and solid geometry, simultaneous equations, polynomial roots, radicals, trigonometry (right and oblique triangles), graphical analysis and engineering units/notation.

Learning Outcomes:

At the end of this course, the student will:

- A. Perform fundamental operations with numbers;
- B. Solve applications of ratios and direct and inverse proportions;
- C. Examine measurement with accuracy and precision;
- D. Solve algebraic equations and formulas with an emphasis on applications;
- E. Solve trigonometric problems with an emphasis on applications;
- F. Analyze polygons and circles with an emphasis on applications;
- G. Analyze basic geometric solids with an emphasis on applications;
- H. Interpret and solve word problems using mathematics;
- I. Interpret data using introductory statistics;
- J. Learn to use tools and software in the workplace.

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. Read, write, round, add, multiply, and divide whole numbers; (A)
2. Utilize PEMDAS for simplifying expressions; (A)
3. Read, write, round, add, multiply, and divide fractions; (A)
4. Read, write, round, add, multiply, and divide decimal numbers; (A)
5. Analyze ratio, proportion, and percentage problems; (B)
6. Use ratios, proportions, and percentage in real-world problems; (B)
7. Work with measurement numbers; (C)
8. Work with units typically found in the workplace; (C)
9. Convert between units of measurement; (C)
10. Take real-world measurements; (J)
11. Read, write, round, add, multiply, and divide signed numbers; (D)
12. Read, write, round, add, multiply, and divide basic exponents and roots; (D)
13. Read, write, round, add, and subtract simple algebraic expressions; (D)
14. Solve simple equations; (D)
15. Set up and solve word problems using algebra; (D)
16. Measure angles; (E)
17. Compute angles and sides of triangles; (E)

18. Find perimeters and areas of common shapes; (F)
19. Apply fundamental equations for common solids to determine properties; (G)
20. Solve simple systems of equations; (H)
21. Solve quadratic equations; (H)
22. Read and construct graphs (I)
23. Calculate averages; (I)
24. Calculate the median of a data set; (I)
25. Determine the mode(s) of a data set; (I)
26. Compare mean, median, and mode for data; (I)
27. Perform calculations using a physical or computer/web-based calculator; (J)
28. Use a calculator to compute ratios, proportions, and percentages; (J)
29. Use software to fully analyze triangles; (J)
30. Use computer software to create graphs; (J)
31. Use software to compute statistics for large data sets; (J)

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.

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 in the BPCC Student Handbook.

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

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

Hours: 8:00 a.m. - 4:30 p.m. Monday - Friday, excluding holidays and weekends.