

# Bossier Parish Community College

## Master Syllabus

**Course Prefix and Number:** MATH 114

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

**Course Title:** Finite Math

**Course Prerequisites:** A grade of “C” or higher in MATH 102

**Textbook(s):** Lial, Hungerford, Holcomb, Mullins. Finite Mathematics with Applications, 12<sup>th</sup> edition. Pearson, 2015. ISBN: 9780134767611

**Course Description:** Systems of linear equations, matrices, and matrix algebra; linear inequalities; linear programming; counting techniques: permutations and combinations; probability; basic concepts in financial mathematics (annuities included); and an introduction to statistics.

### Learning Outcomes:

At the end of this course, the student will:

- A. solve problems related to finance;
- B. solve systems of linear equations and matrices;
- C. use linear programming to solve application problems;
- D. work with sets, Venn diagrams, and basic concepts of probability;
- E. apply basic counting principles to find probability; and
- F. apply statistics.

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 simple and compound interest problems; (A)
2. solve problems dealing with annuities and amortization; (A)
3. solve systems of linear equations using substitution; (B)
4. solve systems of linear equations using elimination; (B)
5. recognizing inconsistent and dependent systems of linear equations; (B)
6. solve a larger system of linear equations using substitution; (B)
7. solve a larger system of linear equations using matrices; (B)
8. solve applications of systems of linear equations; (B)
9. perform basic matrix operations; (B)
10. determine the inverse of a matrix; (B)
11. solve applications using matrices; (B)
12. graph a system of linear inequalities; (C)
13. solve linear programming problems using the graphical method; (C)
14. solve applications of linear programming; (C)
15. perform operations on sets; (D)
16. create Venn diagrams to solve application problems; (D)
17. compute probability; (D)
18. compute odds; (D)
19. compute expected value of probability distributions; (E)
20. solve problems using the multiplication counting principle; (E)
21. solve problems using permutations; (E)

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22. solve problems using combinations; (E)
23. apply counting principles to find probabilities; (E)
24. compile frequency distributions from a data set; (F)
25. determine measures of central tendency from a data set; (F)
26. compute the standard deviation of a data set; (F) and
27. analyze properties of a normal distribution. (F)

**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 will take the final exam in a monitored and controlled setting. Students who live less than one hour from Bossier Parish Community College (as determined by Google Maps using the address the student has listed in LoLA) will take the exam on the campus. Students who live outside of the area must notify their instructor via email to discuss alternate testing locations. **Under no circumstances will any student take the exam online in an unmonitored and uncontrolled situation.**

**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.

**COORDINATOR FOR SECTION 504 AND ADA**

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Equity/Compliance Coordinator

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Human Resources Office, A-105

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