

SUFFOLK COUNTY COMMUNITY COLLEGE
COLLEGE-WIDE COURSE SYLLABUS
MAT108 (formerly MA18)

I. COURSE TITLE:

Mathematics and the Law

II. CATALOG DESCRIPTION:

For students pursuing Paralegal Studies degree program. Topics include statistics, logic, consumer mathematics, functions, linear systems of equations, graphing, geometry and linear programming. Topics applied to legal problems such as introduction of statistical evidence, computation of damage awards, child support, preparation of mortgage and closing documents, completion of bankruptcy petitions, distribution of decedent's estate, calculation of taxes during probate, preparation of graphs for prospectuses, valuation of professional practice, computation of child support and maximization of law firm's profit. Prerequisite: MAT007 or equivalent. Note: *Credit given for MAT108 or MAT102, but not both.* A-G / 3 cr. hrs.

III. COURSE GOALS:

- A. Introduce elementary logic and statistical ideas that are used in the legal field.
- B. Discuss the mathematics of finance.

IV. COURSE OBJECTIVES:

Upon successful completion of this course, students will be able to:

- A. apply mathematical logic to determine the validity or invalidity of arguments in a legal setting;
- B. use fractions, decimals, and percents to draft legal documents in bankruptcy and matrimonial actions;
- C. understand consumer mathematics as needed to assist in real estate matters;
- D. apply formulas to properly compute child support in matrimonial cases;
- E. construct and interpret corporate graphs;
- F. interpret and apply probability and statistics as needed in litigation cases and in the use of statistical evidence;
- G. maximize law office profits using linear programming techniques;
- H. perform geometric computations as needed in real estate contracts.

V. Topics Outline with Timeline

Topics	Approximate Time (Including Examinations)
A. <u>Logic</u> <ol style="list-style-type: none"> 1. deductive thought 2. inductive thought 3. conjecture, proof 4. history of logic 5. definitions 6. truth tables 7. arguments, theorems, proof (direct and indirect) 8. validity 9. legal applications 	2 weeks
B. <u>Statistics</u> <ol style="list-style-type: none"> 1. definitions 2. collection of data 3. organization of data 4. frequency distributions and graphs 5. measures of central tendency 6. measures of dispersion 7. probability 8. probability distributions 9. legal applications 	3 weeks
C. <u>Real numbers</u> <ol style="list-style-type: none"> 1. natural numbers 2. integers 3. rational numbers 4. irrational numbers 5. order of operations 6. legal applications 	2 weeks
D. <u>Systems of Linear Equations</u> <ol style="list-style-type: none"> 1. geometric interpretation 2. matrices 3. determinations 4. methods of solution 5. legal applications 	2 weeks
E. <u>Geometry</u> <ol style="list-style-type: none"> 1. figures 2. perimeter 3. circumference 4. area 5. volume 6. legal applications 	2 weeks

<p>F. <u>Further Applications</u></p> <ol style="list-style-type: none"> 1. actuarial information 2. mortgage and closing documents 3. functions and formulas as used in probate and child support matters 4. graphing comparative charts 5. linear programming 6. maximize law firm profit. 	3 weeks
--	---------

VI. Evaluation of Student Performance:

To be determined by the instructor

VII. Programs that require this course:

None

VIII. Courses that require this course as a prerequisite:

None

IX. Supporting Information:

Mathematics tutoring services, as well as video and computer aids, are provided for all students through the Math Learning Center (Ammerman Campus, Riverhead 235), the Center for Academic Excellence (Grant Campus, Health, Sports and Education Center 129), and the Academic Skills Center (Eastern Campus, Orient 213).