

**Math 106 – Math for the Liberal Arts (proposal)**  
**SYLLABUS**

Professor:

Office:

Phone:

Office Hours:

Text: Bennett, J. & Briggs, W., Essentials of Using and Understanding Mathematics.  
Addison-Wesley: Boston. 2003.

Prerequisites: MAT 103 or placement

**Course Description:**

**Math for the Liberal Arts** is an introduction to non-technical applications of mathematics in the modern world. The course is designed to cultivate an appreciation of the significance of mathematics in daily life and develop students' mathematical reasoning. Subjects include Quantitative Information in Everyday Life, Financial Management, Statistics, and Probability.

As for all college math classes, students should plan on spending two hours outside of class for each hour in class, i.e. a **minimum of 6 hours a week**.

**Course Goals:**

Upon completion of this course, students should:

1. Understand that mathematics is relevant to their lives;
2. Develop an ability to reason with quantitative information in new ways;
3. Improve their self-confidence in dealing with mathematical issues;
4. Strengthen the critical thinking skills needed in life.

**Course Requirements:**

1. Attendance is required and students are expected to arrive for class on time. The final grade will be lowered for more than three (3) unexcused absences, and three late arrivals count as one absence. It is the student's responsibility to inform the professor so as not to be counted as absent/late. If a student is absent or late to class, he/she is responsible for getting the lecture notes, handouts, and/or assignments during that absence.
2. Homework will be given regularly on material covered in class and students are encouraged to work cooperatively. However each student is responsible for ALL the assigned material and must be prepared to turn in homework and discuss it in class. All work must be shown and students must be able to explain their reasoning, either orally or in writing. In other words, students can work on their homework together, but should not copy work from each other.
3. Quizzes, exams and a cumulative final exam will be given and students are expected to take them at the times scheduled. If the student is unable to do so, the student needs to contact the professor before class and must provide a documented excuse. Students may leave messages with the Math Department secretary at x1211.
4. In the real world, problem solving is often done cooperatively, where individuals with different strengths and weaknesses work together, discussing and evaluating various solutions. With this

in mind, students will be working in collaborative groups on quiz problems throughout the semester. However, this does not mean that students can abdicate their personal responsibility - every student is required to attend regularly, actively contribute to group efforts and each must understand the final solution. Students will be asked to evaluate the contributions of the members of their group at the end of the semester.

5. Exams will be taken individually. Calculators are required and should be used appropriately.
6. Students needing help or looking for a place to work cooperatively are urged to take advantage of the tutoring services offered at Lincoln.

### **TENTATIVE SCHEDULE:**

#### **Ch. 3 Numbers in the Real World (week 1-3)**

Uses and Abuses of Percentages  
Putting Numbers in Perspective  
Dealing with Uncertainty  
How Numbers Deceive  
Exam 1

#### **Ch. 4 Financial Management (week 4-6)**

The Power of Compounding  
Savings Plans  
Loan Payments, Credit Cards, and Mortgages  
Exam 2

#### **Ch. 5 Statistical Reasoning (week 7-10)**

Fundamentals of Statistics  
Should You Believe a Statistical Study  
Statistical Tables and Graphs  
Graphics in the Media  
Correlation and Causality  
Characterizing as Data Distribution  
Exam 3

#### **Ch 6 Probability: Living with the Odds (week 11-13)**

Fundamentals of Probability  
Combining Probability  
The Law of Averages  
Counting and Probability  
Exam 4  
**Final Exam or Project (week 14)**

**Tentative Grading:** Final grades will be determined approximately as follows:

Homework	100 points
Participation	100 points
Quizzes	200 points
Four Exams	400 points
<u>Final Exam</u>	<u>200 points</u>
Total	1000 points

The grading scale is as follows:

A	93-100%	A-	89-92%		
B+	86-88%	B	82-85%	B-	79-81%
C+	76-78%	C	72-75%	C-	69-71%
D+	64-68%	D	58-63%	F	0-57%

**Note: The professor reserves the right to alter this syllabus as needed.**