Mrs. Vollaro
Math 102: Mathematics for Liberal Arts Students

SYLLABUS

MODULE: THE DIGITAL REVOLUTION (INFORMATION SCIENCE)
Goals:
Learn about identification numbers and check digits.
Apply specific formulas and rules to verify check digits, correct errors in a given code.

LESSON	TEXT SECTIONS
1-2	16.1: Check digits
3-4	16.2, 16.3: Postnet code

MODULE: PROBABILITY
Goals:
Explain what is meant by "permutation", "combination", and "counting principle"
Explain what is meant by "random"
Explain what is meant by "probability"
Explain how to compute probabilities, including the use of permutations and combinations
Explain and graph a density function
Explain the Law of Large Numbers

LESSON	TEXT SECTIONS
1-4	Counting Principle, Permutations, Combinations (SEE HANDOUTS)
5-6	8.1: Probability Models and Rules 8.2: Discrete Probability Models
7-8	8.3: Equally Likely Outcomes
9-10	8.4: Continuous Probability Models

MODULE: STATISTICS
Goals:
Explain how to read several types of graphs depicting data, including histograms
Explain how to compute and interpret mean, median, quartiles, variance, and standard deviation
Explain the significance and usefulness of the normal curve

LESSON	TEXT SECTIONS
1-2	5.1: Displaying Distributions 5.2: Interpreting Histograms 5.3: Displaying Distributions
3-4	5.4: Mean and Median 5.5: Quartiles 5.6: Five-Number Summary
5-6	5.7: Standard Deviation
7-9	5.8: Normal Distributions 5.9: The 68-95-99.7 Rule

10	7.1: Sampling
	7.2: Bad Sampling Methods
	7.3: Simple Random Samples
	7.4: Cautions

MODULE: GRAPH THEORY

Goals:

Learn graph vocabulary

Learn about Euler and Hamiltonian Circuits

Apply Hamiltonian Circuits

LESSON	TEXT SECTIONS
1-2	1.1: Euler Circuits
	1.2: Finding Euler Circuits
3-4	1.3: Beyond Euler Circuits
	1.4: Applications
5-6	2.1: Hamiltonian Circuits and Counting
7-8	2.2: **T**raveling **S**alesman **P**roblem
	2.3: TSP, part II
9-10	2.4: Critical Paths

MODULE: YOUR MONEY AND RESOURCES

Goals:

Learn about earning interest (simple and compound)

Learn about savings and loans

LESSON	TEXT SECTIONS
1-2	21.1: Simple Interest
	21.2: Compound Interest
3-4	21.3: Limit to Compounding
	21.4: A Model for Saving
5-6	22.3: Conventional Loans
	22.4: Annuities

**Expect an exam after every three sessions (depending on the Calendar/holidays) **

The 14th class will be dedicated to both learning to play SUDOKU and reviewing for the Final. The Final is given on the 15th class meeting. **THERE IS NO MAKEUP FOR THE FINAL**.