MATH 160 Introduction to Contemporary Mathematics

Catalog Description: (3) I, II, S. Mathematics as used in the contemporary world. Combinatorics and probability; descriptions of data; graph theory; and various additional topics selected by the individual instructors.

Prerequisites: MATH 100.

Textbooks: Section A: *Excursions in Modern Mathematics,* Peter Tannenbaum and Robert Arnold, Prentice Hall, Fourth Edition. Section D: *For All Practical Purposes,* W.H. Freeman, Sixth Edition.

Course Objectives: This course provides an introduction to some contemporary uses of mathematics and in particular would meet the general education requirement mandated by the Board of Regents for education majors. This course explores ways in which mathematics is used to understand the contemporary world and make decisions. Topics include: combinatorics and probability; descriptions of data; graph theory; *and various additional topics selected by the individual instructors from those given below.*

Sessions: Three hours per week combining lectures, recitation, and weekly quizzes.

Chapter	Topics	Sessions
1	The Mathematics of Voting	3
2	Weighted Voting Systems	3
3	Fair Division	3
4	The Mathematics of Apportionment	3
5	Euler Circuits	3
6	The Traveling Salesman Problem	3
7	The Mathematics of Networks	3
8	The Mathematics of Scheduling	3
9	Spiral Growth in Nature	2
10	The Mathematics of Population Growth	2
11	Symmetry	2
12	Fractal Geometry	2
13	Collecting Statistical Data	2
14	Descriptive Statistics	2
15	Chances, Probability, and Odds	2
16	Normal Distributions	2
Reviews		5
Total		45