Youngstown State University
Department of Mathematics and Statistics

Course Outline for Mathematics 3750

Course Title: History of Mathematics

Course Credit: 3 s.h.

Text: History of Mathematics, D.M. Burton, McGraw Hill

Course Prereq: MATH 3750 requires either MATH 2673 or MATH 3715.

Course Description: This course is a survey of the historical development of mathematics.

Course Objectives: The goals for the course include:

- To provide an overview of mathematics so that students can understand how various courses fit together.
- To improve oral and written communication skills in a technical setting.
- To indicate how history of mathematics might be used in a secondary education classroom.

General Education Requirement: MATH 3750 is a General Education course. The general education goals are:

- To write and speak effectively.
- To process and present both quantitative and qualitative information using technology.
- To reason critically both individually and collaboratively.
- Comprehend mathematical concepts in both applied and abstract contexts.

Writing Intensive Requirement: Math 3750 is designated as a Writing Intensive General Education course. Students should investigate a thematic topic, gather evidence from the library, Internet, or other appropriate sources, and write a research paper using a computer.

Material Covered:

SECTIONS	TOPICS
1.1-1.3	Early Number Systems and Symbols
2.1-2.6	Mathematics in Early Civilizations
3.1-3.5	The Beginnings of Greek Mathematics
4.1-4.5	The Alexandria School: Euclid
5.1-5.5	The Twilight of Greek Mathematics: Diophantus
6.1-6.4	The First Awakening: Fibonacci
7.1-7.4	The Renaissance of Mathematics: Cardan & Tartaglia
8.1-8.4	The Mechanical World: Descartes & Newton
9.1-9.3	The Development of Probability Theory: Pascal, Bernoulli, & Laplace
10.1-10.3	The Revival of Number Theory: Fermat, Euler, & Gauss
11.1-11.4	Nineteenth Century Contributions: Lobachevsky to Hilbert
12.1-12.3	Transition to the Twentieth Century: Cantor & Kronecker
13.1-13.3	Extensions & Generalizations: Hardy, Hausdorff, & Noether

Grading: A grading and attendance policy will be distributed by the instructor.

Semester: Fall 2006

Last Day to Withdraw with a "W": Thursday, November 2, 2006