Minnesota State University Moorhead

MATH 486: History of Mathematics

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites: This course requires the following prerequisite MATH 262 - Calculus II

Corequisites: None

MnTC Goals: None

Topical and chronological survey of the main branches of mathematics. Required for Math Education majors. May not be used as a restricted elective for any other emphasis nor for the B.A. degree in mathematics.

B. COURSE EFFECTIVE DATES: 06/01/1995 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

- 1. Mathematics of ancient Egypt, Greece, China, India, the Arab world, and others.
- 2. Rise of the proof
- 3. Origins of trigonometry, logarithms, and calculus
- 4. Additional math history topics

D. LEARNING OUTCOMES (General)

- 1. The student will understand the origins of basic mathematical structures and ideas, such as rigorous proofs, incommensurable ratios, calculus, infinite series, etc.
- 2. The student will understand the historical reasons for the creation of various mathematical functions, such as trigonometric and logarithmic functions.
- 3. The student will gain a greater understanding of the field of mathematics as a whole, and be able to apply big picture concepts in a secondary education mathematics classroom.
- 4. The student will understand that the history of mathematics includes mathematical advancements from a wide variety of cultural backgrounds.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted