Math 1155: History of Mathematics

Credit hours: **3 credit hours**
Prerequisites: **MATH 1139 with a grade of C or better**

Course Description

This course traces the development of mathematical thought through history. Topics include mathematicians, primitive number systems and algorithms, early formulas for area and volume, proofs of theorems, pi, the golden ratio, the development of advanced mathematics, the computer, calculus, network theory and non-Euclidean geometries. Note: Recommended for future teachers.

Course Objectives

1. Analyze the history of mathematics and its development
2. Recognize the mathematicians who contributed to the field
3. Establish effective mathematics teaching practices and facilitate meaningful mathematics discourse

Learning Outcomes

1. Write a time line for the history of mathematics including mathematicians and important mathematical events
2. Complete computations in the manner of ancient mathematicians
3. Research the lives of important mathematicians and report their contributions to the field of mathematics
4. Examine and become familiar with some historically significant problems and theorems in mathematics
5. Chart the history of the Pythagorean Theorem, pi, calculus, and computing machines
6. Describe the interaction between and among cultures as mathematics developed

Course Topics

I. HISTORY
- A. Mathematicians
- B. Mathematical events
- C. Pythagorean theorem
- D. Pi
- E. Calculus
- F. Computing machines

II. COMPUTATIONS
- A. In the style of various ancient mathematicians

III. RESEARCH
- A. Lives of mathematicians
- B. Contributions to the field of mathematics

IV. HISTORICALLY SIGNIFICANT MATHEMATICS
- A. Famous problems
- B. Important theorems

V. CULTURE
- A. Interaction between and among cultures as mathematics developed