Approved Innovative Course

Course: Modern Geometry

(F) use concepts of projective geometry to explore conic sections.

(3) c prconic

Description of specific student needs this course is designed to meet:

This course provides an opportunity for students to directly connect concepts of art and perspective to advanced mathematical ideas, thus offering relevance for and promoting interest in mathematical concepts.

The study of modern geometry will expose students to new ways of thinking about mathematical concepts while reinforcing traditional concepts in geometry, with the hope that exposure to modern geometry may encourage and inspire students to pursue further studies in mathematics.

Major resources and materials:

(1) Experiencing Geometry, 3/E
David W. Henderson, Cornell University
Daina Taimina, Cornell University

ISBN-10: 0131437488
ISBN-13: 9780131437487

Publisher: Prentice Hall
Copyright: 2005
Format: Paper; 432 pp
Published: 07/28/2004

(2) Euclid's Elements *(available on-line at http://cs.clarku.edu/~djoyce/java/elements/elements.html)*

(3) Survey of Classical and Modern Geometries, A: With Computer Activities
Arthur Baragar, University of Nevada, Las Vegas

ISBN-10: 0130143189
ISBN-13: 9780130143181

Publisher: Prentice Hall
Copyright: 2001
Format: Paper; 370 pp
Available on Demand

Other Resources:

Geometer's Sketchpad (or other dynamic geometry software)

Artwork: Images of artwork drawn without perspective (pre-Renaissance) and with perspective (Renaissance – present day).