SYLLABUS

ART & SCIENCE IN EARLY MODERN EUROPE: GIOTTO TO GALILEO
Professor Roxann Prazniak
300 Level
Contact Hrs: 45

SIENA, ITALY

Course Description

In the early modern era, inquiry into the "spirit of nature" was common ground for intellectual experimentation in both the visual arts and scientific exploration. From Giotto's experiments with naturalism and three-dimensional perspective to Kepler's search for musical harmonies governing the cosmos, art and science/mathematics were interdependent in the making of European intellectual life and politics. Galileo's use of the telescope and observations of the moon's surface inspired rival camps among artists portraying Christian themes, and Isaac Newton devoted extensive research to the alchemical image of the "greene lion."

This course will focus on the interconnectedness of developments in the arts and sciences in Europe from 1300-1700.

Requirements

- Journal of reflections on readings and site visits 30%
- Class participation 20%
- Midterm and final essays 50%

A course packet will provide reading materials. Reading selections will be limited to ten pages each. Advanced readings in full text of articles and volumes containing course selections. Weekly class meetings will emphasize discussion based on readings with occasional, brief background lectures. Meetings at locations of historical and artistic significance will continue our class discussions.

Course Schedule

Week #1 **Craft, Art, Science: Creativity in Historical Context**
Reading: Bruce Cole, "The Social World of the Artist," in *The Renaissance Artist at Work* [Harper Collins: 1983]

Mary Hollingsworth, "Merchants and Morality" in *Patronage in Renaissance Italy* [1994]

Week #2 Benjamin G. Kohl, "Giotto and His Lay Patrons" in Derbes and Sandona, eds., *The Cambridge Companion to Giotto* [Cambridge UP: 2004]

Mario Biaglioli, "Galileo's Self-Fashioning" in *Galileo Courtier: The Practice of Science in the Culture of Absolutism* [University of Chicago Press: 1993]

Week #3 **Excursion:** Florence, Museum of Science
[Journal due]

Week #4 **Secrets of Nature: Light**
Reading: R.Bacon, "Of Art and Nature"

Lindberg, D., "Medieval Latin Theories on the Speed of Light," in *Studies in the History of Medieval Optics* [1983]

David Hockney, "The Apparatus of Optical Projections," in *Secret Knowledge: Rediscovering the Lost Techniques of the Old Masters* [Viking Studio: 2001]

Week #5 **Mathematics and Perspective**
Reading: R. Zwijnenberg, "Linear Perspective: Invention or Discovery?' in *The Writings and Drawings of Leonardo da Vinci: Order and Chaos in Early Modern Thought* [Cambridge UP: 1999]
[Midterm Essay Due]

Week #6 **Excursion**: Florence, Uffizi
Leonardo, Study of a Tuscan Landscape [1473], Adoration of the Magi [1481], Annunciation [1473]

Week #7 **Hydraulics: Study and Representation of Water**
Reading: R. Zwijnenberg, "Water' in *The Writings and Drawings of Leonardo da Vinci: Order and Chaos in Early Modern Thought* [Cambridge UP: 1999]

Week #8 **Galileo' Moons**
Reading: Galileo, "The Starry Messenger: [1610]
Reeves, "In the Shadow of the Moon" in *Painting the Heavens: Art and Science in the Age of Galileo* [Princeton UP: 1997]

Week #9 **Weekend Excursion**: Padova or Pisa
[Museums/Sites related to Galileo's work]
[Journal Due]

Week #10 **Kepler's Music of the Spheres**
Reading: Stephenson, B., "The Reconstruction of Ptolemy's *Harmonics*," and "*The Harmonice Mundi*" in The Music of the Heavens; Kepler's Harmonic Astronomy [Princeton UP: 1994]

Week #11 **Newton's Alchemical Quest in Artistic and Scientific Representations**
Reading: Dobbs, B. J. T., "Chemistry and Alchemy at Cambridge" in *The Foundations of Newton's Alchemy or, 'The Hunting of the Greene Lion'* [Cambridge UP: reprinted 1984]