Administrative Unit: History and Social Sciences Department

Course Prefix and Number: HIST 303

Course Title: History of Philosophy and Modern Science

Number of Credit Hours: 3 Lecture Hours: 3 Laboratory Hours: 0

Catalog Description: Evolution of scientific thought from 1600 A.D. to the present. Cross-listed as PHIL 303.

Prerequisite(s)/Corequisite(s): HIST 102

Text(s): Alioto, Anthony M. A History of Western Science. Prentice-Hall.


Course Objectives:

• To inquire philosophically into the construction of modern science, the Scientific Revolution from Copernicus to Newton.
• To examine the critical debate over the nature of “scientific revolutions,” paying close attention to the actual construction of modern science.
• To critically examine the so-called scientific method in the context of the actual actions of the creators of modern science.
• To study the basic scientific theories from Newton to Hawking.

Measurable Learning Outcomes

• Demonstrate a basic knowledge of the changes in scientific thinking from Aristotle to Newton.
• Analyze the historical context in which scientific ideas are created, and how that context actually helps to shape the internal history of science.
• Critically evaluate abstract philosophical descriptions of the scientific method and how these obtain or do not obtain in actual scientific work

Topical Outline (major areas of coverage):

• The Aristotelian Universe
• The Hermetic Challenge
• Copernicus and Kepler
• Galileo
• Rationalism
• Newton
• The Newtonian World
• The Enlightenment
• Geology
• Darwin
• Classical Physics and Chemistry
• Einstein and the Theory of Special and General Relativity
• Quantum Mechanics
• Cosmology
• Biology and Psychology

Recommended maximum class size for this course: 35

Library Resources: Online databases are available at http://www.ccis.edu/offices/library/resources.asp. You may access them from off-campus using your eServices login and password when prompted.

Prepared by: Anthony M. Alioto

Date: May 11, 2005

NOTE: The intention of the master syllabus is to provide an outline of the contents of this course, as specified by the faculty of Columbia College, regardless of who teaches the course, when it is taught or where it is taught. Faculty members teaching this course for Columbia College are expected to facilitate learning pursuant to the course objectives and cover the subjects listed in the topical outline. However, instructors are also encouraged to cover additional topics of interest so long as those topics are relevant to the course’s subject. The master syllabus is, therefore, prescriptive in nature but also allows for a diversity of individual approaches to course material.

Office of Academic Affairs
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