Phil 1400 – Philosophy and the Sciences

Spring 2012

Instructor: Dr. Sheralee Brindell

Office: Hellems 169A

Office Hours: Wednesdays (beginning 1/25), 10-11:30 AM. Other times by appt.

Contact: 303-492-3392 or Brindell@colorado.edu (email is generally a better mode)

TAs: Julia Gibson (Julia.Gibson@colorado.edu), Chris Nelsen (Christian.Nelsen@colorado.edu)

Part IA Course Description:

The course is intended to introduce the student to some of the philosophical issues which arise in connection with modern science. We will begin by tracing science back to its early roots as ‘natural philosophy’ (i.e., philosophical investigations into the natural world) and work our way up through issues arising from the theories of both ‘special’ and ‘general’ relativity. We will discuss issues connected to the difference between science and pseudo-science, questions of proper scientific method, issues to do with confirmation and falsification, the nature of scientific revolution, and the connections between theory and observation, and theory and evidence (to name a few).

Part IB Course Requirements:

In order to pass the course, students must complete with passing grades a midterm, a final examination, and a short paper. The midterm is in two parts and is scheduled to be in class on 2/29 and in recitation (for part 2) on 3/2. The midterm and final exams are each worth 37% of the total grade for the course. The short paper is worth 20%. The remaining percentage points will be taken up by attendance and participation in recitation sections.

Part IC Required Texts:

The texts for this course are:

Worldviews: An Introduction to the History and Philosophy of Science, second edition, Dewitt.

The Structure of Scientific Revolutions, third edition, Kuhn.

The Scientific Background to Modern Philosophy: Selected Readings, Matthews (ed.)


A course reading packet (in progress)
Part II  Catalog of Policy Statements

Policy Regarding Disability Accommodations:

If you qualify for accommodations because of a disability, please submit to me a letter from Disability Services in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities. Contact: 303-492-8671, Center for Community, N200, and http://www.colorado.edu/disabilityservices.

If you have a temporary medical condition or injury, see guidelines at http://www.colorado.edu/disabilityservices/go.cgi?select=temporary.html

Policy Regarding CU Boulder Honor Code:

All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council (honor@colorado.edu; 303-735-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion).

Policy Regarding Accommodations for Religious Observance:

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, you should contact your TA at the beginning of the term to alert her to any potential conflicts between religious observances and class attendance or exam taking. All reasonable measures will be taken to assist students with these issues, but be sure to do your part, too. See http://www.colorado.edu/policies/fac_relig.html for more.

Part III  Schedule of Topics (be advised that this represents a tentative schedule, and that I may adjust this as needed)

Week 1 – 1/18: Administrivia (hand out syllabi, go through course structure, announce exams, policies, etc.)

Week 2 – 1/23: Truth (BOLO). Readings: Dewitt, Chap 2

1/25: Truth (cont). NNR

2/1: Investigative Methods: Empiricism and Rationalism. Readings: Matthews (excerpt from F. Bacon’s *New Organon*, and from Descartes’ *Discourse on Method*)


2/8: Aristotle. Readings: Packet (G.E.R. Lloyd Chaps 7,8), Matthews (Aristotle’s *Posterior Analytics*).

Week 5 – 2/13: Copernicus (not the monkey). Readings: Matthews (Copernicus’ *Commentariolus* and *Epistle Dedicatory*)


Week 6 – 2/20: Kuhn (cont.). Readings: Chapter 2

2/22: Kuhn (cont.). Readings: Chapter 3

Week 7 – 2/27: Kuhn (cont.). Readings: Chapter 4

2/29: In class Exam Part I (Part II will be in recitation)

Week 8 – 3/5: The Nature of Science: Falsifiability. Readings: Dewitt, Chapter 7


3/14: Theory and Observation. Readings: Hanson (reading packet)

Week 10 – 3/19: Paradigms and Anomalies. Readings: Kuhn, Chapters 5 and 6, Laudan (reading packet)


Week 11 – 3/26 and 3/28 *Spring Break: No Class Meetings*

Weeks 12-16: TBA