



RADNOR HIGH SCHOOL
COURSE SYLLABUS

DRAFT

SENIOR SEMINAR
INTERDISCIPLINARY 0040



I. Course Description

<Course description is listed in the Program of Studies>

II. Materials & Equipment

Summer Materials: Galapagos (Vonnegut), Life of Pi (Martel), A Short History of Nearly Everything (Bryson), Blade Runner (dir. Scott)

Packets of articles (many)

Themes in World Literature (Elliott, et al., eds.) – short stories, poems, selections from longer works

Man the Myth-Maker (and other sources of myths)

Joseph Campbell video, packet from Power of Myth (Moyers & Campbell)

Cosmos video (Sagan)

Oedipus Rex (Sophocles) and critical essays on Oedipus Rex

The Universe in a Single Atom (Dalai Lama – selection)

From Certainty to Uncertainty (Peat – selection)

Across the Frontiers (Heisenberg – selection)

The Dancing Universe (Gleiser – selection)

The Scientist as Rebel (Dyson – selection)

A Private Universe (DVD from Harvard-Smithsonian Center for Astrophysics)

Lab materials as needed (see Appendix listing labs)

Gulliver's Travels (Swift)

Judgment Day: Intelligent Design video and website (PBS) and Discovery Institute website

The Time Machine (Wells)

Arrow of God (Achebe)

Heart of Darkness (Conrad)

Selections from Origin of Species (Darwin)

Selections from Annie Dillard

Hamlet (Shakespeare)

and Rosencrantz and Guildenstern Are Dead (Stoppard)

Cat's Cradle (Vonnegut)

Perrine's Sound and Sense: Poetry (Arp)

Schoolwires website

Trimmer Guide to MLA Documentation

Advanced Placement English Literature & Composition 9–point scoring rubric

III. Course Goals & Objectives

- A. to gain an understanding of the scope and progress of intellectual history – that is, how thinking has advanced (or degraded) over the history of mankind**
- B. to examine and devise models to explain how revolutions in thought/worldview come about, and to identify and be able to explain common reactions that arise when they do**
- C. to use academic skills to research, analyze, synthesize, and communicate on complicated and multifaceted situations in today's world, in fiction, and in history**
- D. to become conversant in and remain in command of topics in current events**
- E. to sharpen presentation and performance skills**
- F. to understand and explain the mechanism and relevance of the most dramatic developments in physics, chemistry, biology, and earth science**
- G. to break down boundaries of disciplines to effect an “out-of-the-box” thinking that can be applied to finding new solutions to real global problems**
- H. to understand how historical context, cultural context, and individual discipline context have influenced how human beings approach problems (and continue to do so)**
- I. to read a variety of significant literature critically and perceptively**
- J. to develop a sense of the conventions of literary genres, techniques, and terminology**
- K. to appreciate the application of the above in specific works of literature**

- L. to apply techniques of class analysis in independent reading
- M. to structure thought precisely with language
- N. to develop a substantial idea with careful control of both language and composition techniques throughout an extended argument
- O. to apply conventions of English grammar, syntax, and sentence structure in composition
- P. to cultivate fluid syntax and individual style through frequent revision of written work
- Q. to develop and apply vocabulary skills
- R. to sharpen discussion skills of listening, speaking, and responding to the ideas of others through the seminar format
- S. to develop research skills by using the resources of the library efficiently
- T. to differentiate between primary and secondary sources and to use them effectively to support argument and critical judgment
- U. to document sources correctly according to the standards of the MLA
- V. to promote a love of reading and the knowledge of oneself as a reader

Tentative and Still Improving/Growing List of Essential Questions:

- How have man's ideas about *the universe*, *the origin of life*, and *consciousness* changed throughout the ages and how has this affected society?
- How did/do members of different eras, cultures, and groups within society address the problems facing them, and how effective were/are their endeavors?
 - What gives order and meaning to the world? To what extent are humans close to understanding the big topics, and to what extent have our ventures and investigations led to a loss of respect for mystery and/or the growth of a dangerous hubris?
- What is the “proper” balance between faith and reason?
- What are the nature and mechanisms of progress?
- How does an individual's role or job in society affect the way he or she acts, and how does this vary from culture to culture around the world?
- Why are we here, what are we doing here, why is anything here...and why can we think about why we're here?
- What is “modernity” and how has it (as a concept) developed?
- How do “liberal” and “conservative” forces function in different cultures and situations? What drives people or societies to be “liberal” or “conservative”?
- What role does the past – and our knowledge of it – play in today's world?

- To what extent does a society's artistic endeavors reflect the society's values, and how can we tell?

IV. Course Topics (Summary Outline)

Q1: Cosmology (Man* and the Universe)

- Myths, comparative mythology
- Worldviews, paradigm shifts, dealing with change
 - Dissent and censorship
- Happiness, fate, and finding one's place in the world

Q2: Evolution (Man on the Earth)

- The conflict over Darwin's theory
- The essence of Darwin's theory
- The conflict in (American) discourse and education: the Kitzmiller trial, plus conflicts before and after
- Determinism, scientific materialism, and related philosophical inquiry
- Applications of evolutionary thinking, and the concepts of "progress" and being "civilized": ethnocentrism, imperialism, colonialism, xenophobia

Q3: Consciousness (Man in Himself...or Woman in Herself, or Humans in Themselves)

- Scientific examination of the functions of the brain
- Identity
- Free will
- Existentialism

Q4: Project work, presentations, and year-long syntheses

* For the purposes of this course, "Man" is a non-gender-specific term that refers to humans, as in "A man or a woman" or "Mankind or Womankind", depending on the context. For Q3, for example, "Man in His Mind"

V. Assignments & Grading

Weekly or biweekly: activity reports and lab reports on block-day activities/labs
Weekly or more often: contributions to class blog, in-class journals and Type 1 writing

Q1 In-class essays on Summer Assignments

Q1 Impossibly Comprehensive Pre-test (to be followed up with Q4 post-test and development of new pre-test for next year)

Q1 “School by the Sea”: studying major shifts in thinking – “sea-changes” – and developing presentations that could teach the concept to a class of 5th graders. Shifts include: heliocentrism, modernism, psychoanalysis, quantum theory, relativity, total war. Assessment includes research, development of materials for lesson, delivery of lesson, written post-lesson analysis.

Q1 Comparative Analysis of a variety of sources, in discussion and writing

Q1 Essay on literature (Icarus poem)

Q2 DBQ on the Evolution Debate

Q2 Comparative Literary Analysis on novels

Q3 Performance and analysis during study of drama

Q4 Problem-Based Learning project that requires synthesis across disciplines: apply the tools of a given discipline to a problem in a different discipline. Details TBD.

The Bazaar: each student’s “booth” in the Bazaar (to prolong the metaphor) represents a topic of interest that he or she follows all year. This topic is his or her window into current events, which we will discuss weekly or biweekly, as a class or divided in 2 or 3 (depending on how many of the teachers are available).

Topics – and these are literal, not metaphorical (e.g., “War” does not mean “the war between the sexes”) – include Art, Music, Politics, Sport, Gender, Religion, War, Commerce, Film, Chemistry, Physics, Environmental Science, Biology, Philosophy, Architecture, Animals, Agriculture, Sex, Education, Technology. No more than two students can pick the same topic.

This is assessed through discussion, journaling, the accumulation of a portfolio of articles (checked one or more times per quarter), and a Q4 culminating project that will be a community event.