PHIL 2640 - Science and the Modern World
3 Credit Hours

Course Description:

A study of the nature of science and the relationship between science and other areas of modern life including religion, ethics, and politics.

Course Outcomes:

Upon successful completion of this course, students will:

- Define the concepts of explanation, confirmation, and falsifiability.
- Explain the demarcation problem in science.
- Explain scientific realism and its problems.
- Describe several theories critical of modern science.
- List the four classifications of Ian Barbour's fourfold typology of the relationship between science and religion.
- Critically evaluate Stephen Jay Gould's NOMA principle.
- Explain the ethical theories of utilitarianism and deontology and show how they apply to cases of scientific research and technology.
- Argue for a point of view on the issue of using humans in research.
- Argue for a point of view on the issue of using animals in research.
- Explain how science influences public policy and vice versa.

Prerequisites and Corequisites:

None

Course Topics:

- What is science? What can it do? What *can't* it do?
- Science and religion: Are they compatible?
- Science and ethics: Should we make better people?
- Science and ethics: Should we test on animals?

Specific Course Requirements:

You will need to be proactive in keeping up with weekly readings, assignments, and activities. Check each module for a weekly outline of what is required.

Required Textbooks:

Please visit the [Virtual Bookstore](#) to obtain textbook information for this course. Move your cursor over the "Books" link in the navigation bar and select "Textbooks & Course Materials." Select your Program, Term, Department, and Course; then select "Submit."

Supplementary Materials:

None

Hardware and Software Requirements:

Minimum hardware requirements can be found [here](#).

Minimum software requirements can be found [here](#).

Common applications you might need:
To read a PDF file download the latest version of [Adobe Reader here](#)
Don't have Microsoft Word? Explore an alternative [OpenOffice here](#)
Accessing a PowerPoint file? Download the [PowerPoint Viewer here](#)

Web Resources:

Purdue [OWL Online Writing Lab](#) (for APA, MLA, or Chicago style)

The Writing Center [Online Writer's Handbook](#)

Student Resources:

- Technical support information can be found on the [TN eCampus Help Desk](#) page.

- Smarthinking virtual tutoring is available **FREE** of charge. to access Smarthinking, visit the course homepage and select Smarthinking under Course Resources. You also view sample sessions to see what Smarthinking offers and how it works.
- Information on other student issues or concerns can be located on the TN eCampus Student Resources page.

Instructor Information:

Please see "Instructor Information" in the Getting Started Module for instructor contact information, virtual office hours, and other communication information. You can expect to receive a response from the instructor within 24-48 hours unless notified of extenuating circumstances.

Testing Procedures:

There is one exam taken through D2L, the learning management site. The exam is open note/open book. You will also have discussion, papers, and other writings that will be graded.

Grading Procedures:

Evaluation happens formally through graded assignments consisting of written papers (two argumentative critical response papers), seven discussion board posts, and one exam on the material in the Okasha text.

Grading Expectations

Reflective Notes

Beginning in Module 3, each week you will have a reading or collection of readings, which you are expected to complete and then reflect upon. You will then submit a written assignment to the dropbox each week that demonstrates your understanding of the assigned readings.

Critical Response Papers:

- Students will write two critical response papers. A critical response paper is one that summarizes and evaluates. So, roughly the first half of the paper will be a summary of the author's (or speaker's) argument, and the second half will be an evaluation of the content discussed in the first half. The paper should demonstrate a thorough understanding of the author's argument and include carefully reasoned arguments in defense of the student's point of view. The paper should also make as many

connections as possible to course materials, including quotes from the book, from other essays and articles when relevant.

- For the first critical response paper, the student will respond, critically (where 'critically' means 'with substantive engagement', and not necessarily 'with disagreement'), to either Daniel Dennett's or Alvin Plantinga's (but not both) argument in the book *Science and Religion: Are they Compatible?* Students should not do any outside research. Rather, limit your research to the chapters found in *Science and Religion.* In your critical response, do not merely parrot the critical response offered by either Plantinga or Dennett. In other words, part of what you'll read by either Plantinga or Dennett is a critical response to the other. Do not merely parrot these responses when making your own.
- For the second critical response paper, the student will respond, critically, to one of the articles read for class from the *Ethics of Animal Research* (see the reading schedule for UNIT 4, toward the end of this document). Again, students should not do any outside research; rather, research must be limited to the articles found in *Ethics of Animal Research.*

Requirements for paper:

- 800-1000 words
- Double-spaced
- 12 point font
- 1 inch margins
- No cover page
- Saved as a Word .doc
- Proper citations (MLA, APA, Chicago/Turabian)
- Must be turned in online (uploaded through eLearn). Papers not turned in, on time, through the eLearn dropbox must be emailed to the instructor prior to being turned in in class.
- There will be a deduction of one full letter grade for every day the assignment is late.
- The paper must be argumentative within a critical response framework. Do not plagiarize or copy other sources without giving credit to the original author. Intentional and unintentional cases of plagiarism are treated the same: a zero on the paper and a possible F in the class.

Papers will be graded as follows:

Quality of writing = 30%

- Grammar and style are polished = 27 – 30
- Grammar and style are good = 24 – 26.5
- Grammar and style are acceptable, but some problems may make reading difficult = 21 – 23.5
- Grammar and style obstruct reading = 1 – 20.5

Meets minimum requirements = 20% (You must meet all three requirements, below, for credit. This is pass/fail grading.)

- Paper is an argumentative response essay, is on a relevant topic, and meets the required word count = 20
- Paper is not an argumentative response essay = 0
- Paper is not on a relevant topic = 0
- Paper is either under or over the required word count = 0 (Must be between 800 and 1000 words.)

Quality and clarity of argument = 50%

- Excellent summary of author's arguments; excellent evaluation of author's arguments; multiple and relevant connections with other course materials; logical argumentation is employed in defense of student's point of view = 45 – 50
- Good summary of author's arguments; good evaluation of author's arguments; some connections with other course readings; logical argumentation is employed in defense of student's point of view = 40 – 44.5
- Acceptable summary of author's arguments; acceptable evaluation of author's arguments; few connections with other course readings; logical argumentation is employed in defense of student's point of view = 35 – 39.5
- Summary may be seriously deficient; evaluation may be seriously deficient; connections to other course materials may be lacking; logical argumentation and coherence may be lacking = 1 – 34.5

Discussion board posts on debate video

- Students will write three (3) discussion board posts. They will write one (1) 'discussion starter', and two (2) replies. Each 'reply' must reply to a different discussion starter.
- Discussion starters are basically mini-critical response papers. Students will write two (2) substantive (4 or 5 sentence) paragraphs. The first paragraph should briefly summarize what one side of the discussion says (for example, what either Plantinga or Craig say, i.e., what they argue). The second paragraph should be an evaluation of the content in the first paragraph.
- Replies are, basically, a critical response to someone else's discussion starter. For each 'reply', students will write one (1) substantive (4 or 5 sentence) paragraph to do this.
- One reply per discussion starter
- The rubric for the critical response papers applies to the discussion starters, as well. Replies are given either full or no credit (anything like a proper critical response will receive full credit; anything else will receive no credit).
- No late discussion board posts will be accepted.

Discussion board posts on *The Case Against Perfection*, by Michael Sandel

- Students will write six (6) discussion board posts. They will write two (2) 'discussion starters', and four (4) replies. Each 'reply' must reply to a different discussion starter.
- Discussion starters are basically mini-critical response papers. Students will write two (2) substantive (4 or 5 sentence) paragraphs. The first paragraph should briefly summarize what Sandel says in one of the chapters of TCAP. The second paragraph should be an evaluation of the content in the first paragraph. This process will be repeated for the second discussion starter (i.e., in the second discussion starter, students will also briefly summarize what Sandel says in one of the chapters of TCAP, and etc.)
- Replies are, basically, a critical response to someone else's discussion starter. For each 'reply', students will write one (1) substantive (4 or 5 sentence) paragraph to do this.
- One reply per discussion starter.
- The rubric for the critical response papers applies to the discussion starters, as well. Replies are given either full or no credit (anything like a proper critical response will receive full credit; anything else will receive no credit).
- No late discussion board posts will be accepted.

Module 1 Discussion Board Assignments

- For each discussion board assignment in Module 1, students will write a brief post discussing three (3) concepts from the assignment-relevant chapters of the reading that you found most interesting, or most challenging. For example, when doing a discussion post on Chapter 1, it might be interesting to you that the idea that 'science' isn't clearly defined by anyone who practices the sciences, or maybe you find the whole notion that 'science' hasn't been well-defined to challenge some of your preconceptions. Here, you'd post a brief (i.e., two or three sentences) comment about that. And so on.
- Then, students will respond to two (2) other classmates' posts per assignment.
- Your original discussion post is worth twenty points; your two replies are worth ten points a piece. These assignments are essentially pass/fail; so, if you do what is asked of you, you'll get full credit. If you don't, you'll get no credit.

Exam

- There will be one exam on the Okasha readings. The exam will cover chapters 1 – 5, and 7; the exam will not cover chapter 6.

Grading Scale:

Point Range	Assigned Grade
635 - 705 points	A
564 - 634 points	B

Point Range	Assigned Grade
494 - 563 points	C
423 - 493 points	D
under 423 points	F

Graded Items

Description	Points
12 Reflective Notes (weekly response to readings) @ 5 points each	60
Two critical response papers @ 100 points per paper	200
Three discussions in Module 1 @ 10 points each	30
Two discussion starters for *The Case Against Perfection* @ 75 points per discussion starter	150
Four discussion board replies for *The Case Against Perfection* @ 15 points per reply	60
One discussion starter for the Plantinga/Craig vs. Smith/Gale video @ 75 points	75
Two discussion board replies for the Plantinga/Craig vs. Smith/Gale video @ 15 points per reply	30
One exam on the Okasha readings	100
Total	705

Class Participation:

Students are expected to keep up with the weekly reading schedule, and to turn in their assignments on time.

Late Policy:

No late discussion board posts will be accepted. Late papers will be docked one full letter grade for each day late.

The following two statements (1., 2.) were derived from the TBR System-wide Student Rules document, released January 2012:

RULES OF THE TENNESSEE BOARD OF REGENTS STATE UNIVERSITY AND COMMUNITY COLLEGE SYSTEM OF TENNESSEE SYSTEMWIDE STUDENT RULES CHAPTER 0240-02-03 STUDENT CONDUCT AND DISCIPLINARY SANCTIONS

[Read the document in its entirety here.](#)

1. Standards of Conduct:

- Students are required to adhere to the same professional, legal and ethical standards of conduct online as on campus. In addition, students should conform to generally accepted standards of "netiquette" while sending e-mail, posting comments to the discussion board, and while participating in other means of communicating online. Specifically, students should refrain from inappropriate and/or offensive language, comments and actions.

2. [Review the TN eCampus Academic Integrity/Academic Honesty Policy](#)**:**

- In their academic activities, students are expected to maintain high standards of honesty and integrity. Academic dishonesty is prohibited.

Such conduct includes, but is not limited to:

- an attempt by one or more students to use unauthorized information in the taking of an exam
- to submit as one's own work, themes, reports, drawings, laboratory notes, computer programs, or other products prepared by another person,
- or to knowingly assist another student in obtaining or using unauthorized materials.

Plagiarism, cheating, and other forms of academic dishonesty are prohibited.

Students guilty of academic misconduct, either directly or indirectly through participation or assistance, are subject to disciplinary action through the regular procedures of the student's home institution. Refer to the student handbook provided by your home institution to review the student conduct policy.

In addition to other possible disciplinary sanctions that may be imposed, the instructor has the authority to assign an "F" or zero for an activity or to assign an "F" for the course.

Other Course Rules:

Students are expected to:

- Participate in all aspects of the course
- Communicate with other students
- Learn how to navigate in Brightspace
- Keep abreast of course announcements
- Use the assigned course management (Brightspace) email address rather than a personal email address
- Address technical problems immediately:
    - [Contact Technical Support](#)
    - [View Term Calendar here](#)
- Observe course netiquette at all times.

Guidelines for Communications:

Email:

- Always include a subject line.
- Remember without facial expressions some comments may be taken the wrong way. Be careful in wording your emails. Use of emoticons might be helpful in some cases.
- Use standard fonts.
- Do not send large attachments without permission.
- Special formatting such as centering, audio messages, tables, html, etc. should be avoided unless necessary to complete an assignment or other communication.
- Respect the privacy of other class members

Discussions:

- Review the discussion threads thoroughly before entering the discussion. Be a lurker then a discussant.
- Try to maintain threads by using the "Reply" button rather starting a new topic.
- Do not make insulting or inflammatory statements to other members of the discussion group. Be respectful of other's ideas.
- Be patient and read the comments of other group members thoroughly before entering your remarks.
- Be cooperative with group leaders in completing assigned tasks.
- Be positive and constructive in group discussions.
- Respond in a thoughtful and timely manner.

Library:

The [Tennessee Virtual Library](#) is available to all students enrolled in TN eCampus programs and courses. Links to library materials (such as electronic journals, databases, interlibrary loans, digital reserves, dictionaries, encyclopedias, maps, and librarian support) and Internet resources needed by learners to complete online assignments and as background reading will be included within the course modules. To access the Virtual Library, go to the course homepage and select the *Virtual Library* link under Course Resources.

Students with Disabilities:

Qualified students with disabilities will be provided reasonable and necessary academic accommodations if determined eligible by the appropriate disability services staff at their home institution. Prior to granting disability accommodations in this course, the instructor must receive written verification of a student's eligibility for specific accommodations from the disability services staff at the home institution. It is the student's responsibility to initiate contact with their home institution's disability services staff and to follow the established procedures for having the accommodation notice sent to the instructor.

Syllabus Changes:

The instructor reserves the right to make changes as necessary to this syllabus. If changes are necessitated during the term of the course, the instructor will immediately notify students of such changes both by individual email communication and posting both notification and nature of change(s) on the course bulletin board.

Disclaimer

The information contained in this syllabus is for general information purposes only. While we endeavor to keep this information up-to-date and accurate, there may be some discrepancies between this syllabus and the one found in your online course. The syllabus of record is the one found in your online course. Please make sure you read the syllabus in your course at the beginning of the semester. Questions regarding course content should be directed to your instructor.