



Church Issues in Science and Technology

Course Description

This course examines issues and opportunities facing the church today in theology, ethics, and apologetics related to modern science and technology.

Course Objectives

At the end of this course students should be able to do the following:

1. Be able to describe a general history of science and define science according to its general task, concepts, and the structure of scientific inquiry;
2. Differentiate between fact and theory, revelation and interpretation, as these relate to both scientific and theological concepts;
3. Understand the distinction between instrumental and realistic interpretations of theories and words as they relate to scientific theories, especially in their interaction with theology;
4. Have a basic familiarity with the primary apologetic arguments for the Christian faith (and the related criticisms of Christianity) arising from modern science;
5. Articulate a thoughtful position regarding natural theology generally;
6. Have a basic understanding of the breadth of discussion regarding creation and the age of the Earth, the consequences of various hermeneutical choices, and an awareness of how these are likely to impact the church.
7. Describe the theological issues arising from modern science, including physics, genetics, ecology, and neuroscience as they impact the church from within and without. Articulate a clear understanding of how biological advances might impact the concepts of the *imago dei* and Christian Ethics;
8. Differentiate science and technology, and have a general historical understanding of the social and ethical issues accompanying technological change;
9. Identify scientific, pseudo-scientific, and technological influences on behavior and ethical norms within and without the church;

Contact Information

Textbooks

The student is required to read carefully the following texts as assigned (not all will be read in their entirety). Thoughtful reading involves note taking and preparation of reading notes for class discussion, noting lingering confusions, possible objections, comparisons, or anecdotal observations which might aid class discussion of the text.

- (1) Ted Peters, *Playing God*. (Peters)
- (2) Thomas Kuhn, *The Structure of Scientific Revolutions*. (Kuhn)
- (3) Deborah and Loren Haarsma, *Origins, A Reformed Look at Creation, Design, and Evolution*. (Haarsma)
- (4) Alistair McGrath, *Science and Religion, A New Introduction*. (McGrath)
- (5) Selected articles from *Society, Ethics, and Technology* (Fifth Edition). Ed. Morton Winston and Ralph Edelbach (SET) (This is a collection of articles and may be available to rent through Amazon if you prefer that to purchase.)
 - 1.1.2 “Industrial Society And Technological Systems,” Ruth Schwartz Cowan
 - 1.1.4 “History As Technological Change,” Rosalind Williams
 - 1.2.1 “I’d Hammer Out Freedom: Technology As Politics And Culture,” Richard Sclove
 - 1.3.1 “Technology And Responsibility: Reflections On The New Task Of Ethics,” Hans Jonas
 - 2.3.1 “Neuroscience, Nanotechnology, And Ethics: Promise & Peril,” Ray Kurzweil
 - 2.4.1 “Is Google Making Us Stupid?” Nicholas Carr
 - 2.5.2 “Preventing A Brave New World,” Leon R. Kass
- (6) Calvin, *Commentary on Genesis*, 1:14-16 available [online](#).
- (7) Sproul, Lindsey, and Gerstner, *Classical Apologetics* (PDF), pp. 39-90
- (8) David Hume, *Enquiry Concerning Human Understanding*, chs. 7 and 10 only. (Available [online](#))

Course Requirements

1. Readings

Readings should be completed prior to the course. Read carefully and seek conceptual understanding, not just factual recall. Read with the expectation that you will learn from others, even when you disagree with their main point.

Class lectures will not always be directly connected to the reading, but the reading should be expected to contribute to broadening background knowledge to be used more and more as class progresses. Two of the books, by Haarsma and McGrath, are introductory texts. Depending on your background, you may find sections you care to skim, or in which significant ideas are oversimplified. Expect that of the genre, but both contain significant points even for advanced readers.

Depending on your background in science, I would suggest (especially for Thomas Kuhn) that you read with access to the internet and look up the basics of the scientific theories being referenced. It will be difficult, if not impossible, to follow the significance of the changes in paradigms/worldviews Kuhn references without understanding, for example, the basics of phlogiston theory compared to modern chemistry. Wikipedia or something comparable is perfectly sufficient; you just need the basics.

The collection of articles and excerpts in *Society, Ethics, and Society* may be helpful to you in gaining a basic sense of the scope of technological impacts on

society and future challenges that are coming up, as well as a range of reactions to it. Note it is almost uniformly a secular work with a variety of ideologies, but even in disagreement you may find rich material towards your paper for the course, including from the unassigned readings.

(corresponds particularly to Learning Objectives 1,2,3,7, and 8)

2. Free Response essays

There will be an opportunity on Friday to consider a number of situations potentially arising from the content of the course. Questions will be answered by short essay, and will be primarily application-type questions of the sort, “how would you respond to a congregant with the following concern...”

(corresponds to Learning Objectives 1,4,5,6,7, and 9)

3. Final Paper (3500-4000 words)

The final paper will require you to find an emerging issue in science or technology and the life of the church and describe the ways in which there is an apparent pressure on church doctrine, Christian ethical norms, or the life of the church. The issue may be positive, negative, or a mixture of both with respect to the prospects for church life. You should describe the issue in a scientifically and/or technically sound manner, relate the specific doctrine, ethical norm, or ecclesial/social pattern affected, and construct a response that is well-informed and thoughtful. (Topics should relate to three or more of the core learning objectives of the course.)

Rules for Papers

Papers should be presented in well-formatted, 12 pt. Times New Roman or similar font, double-spaced, and with reasonable margins. Proper grammar, structure, and style are expected, and when they are not present, grades will be affected. Edit carefully. Read and re-read what you have written. Ministry involves communication, so you should grow in the ability to structure your thoughts and express them well, even as you grow in the knowledge to be expressed.

Paper lengths are mandatory. Communicating well is as much about communicating succinctly as it is about communicating sufficiently. Over-length papers will be graded only on the argument accomplished in the space allotted. All written assignments may be turned in paper format or emailed to the instructor as .doc or .pdf files. You will receive email confirmation that they have been received.

Make sure you have done appropriate research, especially in primary sources. Document not only quotations but also data and ideas well to ensure there is neither the reality nor the appearance of plagiarism.

Approximate Schedule of Topics and Related Readings

Day (approximate)	Primary Related Reading	Topics
One	Kuhn, McGrath, Calvin, Hume	<ul style="list-style-type: none"> • What is Science? (And when did it arise)? • History and Origins of Science • Relationships Between Christianity and Science • Paradigms and Epistemology • The Progress Problem
Two	Kuhn, McGrath	<ul style="list-style-type: none"> • Special Relativity and Eternity • General Relativity and Sovereignty • Quantum Mechanics, Chaos Theory, and Freedom
Three	McGrath, Sproul <i>et. al.</i> , Haarsma	<ul style="list-style-type: none"> • Natural Theology • Arguments for the Existence of God • Cosmology and Fine Tuning • Creation controversies • Perspectives on Genesis
Four	Peters, SET	<ul style="list-style-type: none"> • Biology and the image of God • Christian Worldview, “Nature,” and the Natural • Classical Ethics and Technological Change • Biotechnology and Ethics • Technology and the Shaping of Society
Five	SET	<ul style="list-style-type: none"> • The Role of Technology in the Church • The Role of the Church in Technology • Information Technology and the Shape of Theological Understanding • The Futures of Technology <p style="text-align: center;">FREE RESPONSE ESSAYS TO BE ANSWERED AT COURSE END</p>