



Course Syllabus

**STCE 5100-1**  
**Christian Theology & Natural Science**  
**Fall 2019**  
**Thursdays 2:10 - 5:00 pm. Hedco**

**Instructor(s)**

Professor Robert John Russell, CTNS, [RRussell@gtu.edu](mailto:RRussell@gtu.edu) & [ctns.org](http://ctns.org)

Professor Ted Peters, PLTS / CTNS, [tedfpeters@gmail.com](mailto:tedefpeters@gmail.com) & [TedsTimelyTake.com](http://TedsTimelyTake.com)

**Course Description**

This basic doctoral seminar in Christian Theology & Natural Science is available for students in all fields while offered by the Concentration in Theology and Science in the GTU Department of Theology and Ethics. In this seminar, we review the work of several field-defining figures from 1965 to date: Ian Barbour, Nancey Murphy, George Ellis, Arthur Peacocke, John Polkinghorne, Celia Deane-Drummond, Michael Dodds, Robert John Russell, Joshua Moritz, and Ted Peters. We will examine the theological implications of physics, cosmology, evolution, genetics, bioethics, ecological ethics, plus astrotheology/astroethics as well as methodology in theology and science, as found in their writings. We will occasionally include ethical issues related to science and technology, and introduce the perspectives of non-Christian religions / spiritualities on science.

The course will consist primarily of reading, analysis, and constructive reflection on the works of theological figures such as those who have significantly shaped the dialogue between faith and science. The selected works are considered basic to the concentration in Theology and Science. Doctoral students as well as M.A. or advanced M.Div. students with a background in theology will find this seminar illuminating and edifying.

Students will be evaluated according to their oral contributions to class discussion, class reports and leadership, plus a term paper.

## Student Learning Outcomes ( SLOs) and Assessment

At the end of this course students will be able to:

| Outcome  | Assessment                          |
|--|-------------------------------------|
| 1. articulate a broad outline of the field of Theology & Science;              | 1. Verbal assessment in class       |
| 2. summarize in some detail at least one controversy in Theology & Science;    | 2. Class presentation(s)            |
| 3. formulate one or more goals for theological construction involving science; | 3. Written assessment in Term Paper |
| 4. demonstrate the ability to write a scholarly paper in Theology & Science.   | 4. Term Paper evaluation            |

## Course Requirements

### CLASSROOM PROCEDURE: VERBAL ASSESSMENT

Routinely, the class will open with a presentation by a faculty person that either provides background for the day's topic or introduces the day's topic. Following the break during some class meetings, one or more students will provide a brief summary of the common reading—an Expository Response—and then initiate open class discussion.

### STUDENT DISCUSSION LEADERSHIP: VERBAL ASSESSMENT

Each student enrolled for course credit will be required to lead one, two, or more class discussions. Each will begin with an *Expository Response* to a selected reading. One or more students will open the second portion of the class with a five minute expositional summary of one or more selected readings, ending with some discussion questions. The student leader(s) will play the role of the professor and will guide the wider group discussion.

### CREATE YOUR OWN DICTIONARY: NO ASSESSMENT

Learning and adopting the vocabulary of the field of Theology & Science is important. As professors, we recommend--even require--that you establish your own theological and scientific dictionary. Perhaps create a computer file to contain it. As you encounter a key term, put it into your dictionary with its definition. Create a footnote for yourself, indicating where you found the term and its definition. Some terms might end up with multiple definitions.

Bring your dictionary to each class session, either in hardcopy or in your computer. A professor may ask each student for new entries in his or her dictionary. Please be ready for each class period.

## TERM PAPER: WRITTEN ASSESSMENT

Each student enrolled for course credit will be required write a term paper of approximately 4000 words and provide an oral summary for the class. The term paper form will follow that of Turabian or *Chicago Manual of Style*, employing footnotes at the bottom of the page. If the footnotes are complete, no additional bibliography is required.

You the student may elect any topic you deem important for your growth either as a theologian, pastor, or Religious Studies scholar. Doctoral students may write a paper that contributes to their degree requirements. It is best for you to clear the topic with the teaching faculty prior to commencing writing. On or prior to the due date, please provide both professors, Russell and Peters, with an eCopy in Microsoft Word via email.

The subject matter of the term paper may limit itself to a close reading of a selected text, either a substantial essay or an entire book. Add reference to additional literature, especially if it offers a critical alternative. Provide an exposition, critical analysis, plus your own constructive proposal.

**Title + your name**  
**150 word abstract**  
**5 key terms**

**Introduction**

**Exposition**  
**Critical Analysis**  
**Constructive Proposal**

**Conclusion**

Your paper may take one of three foci. First, you could elect to offer a critical exposition a single work, either an essay or a book, that deals with one theoretical or ethical issue. Complement this principal work with commentary derived from other literature, especially alternative points of view. Or, second, you could elect to offer an exposition of one thinker in the field of science and theology such as John Polkinghorne or Nancey Murphy or someone similar. Read and report on numerous books in this author's corpus. Or, third, you could elect to define a theological issue and then muster multiple essays and authors to serve your exposition, exploration, and proposal for dealing with this pastoral concern.

A well written term paper is like a sandwich. The introduction and conclusion are like slices of bread. Sandwiched between them is your exposition, critical analysis, and constructive proposal. Also include a 150 word abstract and list of 5 key terms. Present your paper as if it were a scholarly journal article. After all, this is what you're preparing for.

In your introduction please tell the reader what you will do; and in your conclusion remind the reader of what you have just done. Include a thesis, a single statement which makes the most important point in the paper. Repeat the thesis frequently, perhaps in each transition to a new section. Use your exposition, critical analysis, and constructive proposal to illustrate or support the thesis.

## ELECTRONICS IN THE CLASSROOM

While class is in session it is important that each student be attentive. Lap top computers may be used for transcribing notes, but used solely for classroom support. No communicating on line. No game playing. No other distractions.

All cell phones must be turned off. No texting. No tweeting. Thank you.

### Required for Assigned Readings

- Ast     *Astrotheology: Science and Theology Meet Extraterrestrial Life*. Eds., Ted Peters  
Martinez Hewlett, Joshua Moritz, and Robert John Russell. Eugene OR: Cascade  
Books, 2018. Paperback ISBN 978-1-5326-0639-7. \$57
- ATI     *All That Is*, by Arthur Peacocke. Minneapolis: Fortress, 2007.  
ISBN 13: 978-0-8006-6227-1. Amazon: Pb. \$23; Kindle \$9.50.
- CAO     *Cosmology from Alpha to Omega*, by Robert John Russell. Minneapolis: Fortress,  
2008. ISBN978-0-8006-6273-8. Amazon Pb \$30.47; Kindle \$28.95.
- CBGE    *Can You Believe in God and Evolution?* by Ted Peters and Martinez Hewlett.  
Louisville KY: Abingdon Press, 2006. ISBN 978--0-687-64929-7. Amazon Pb \$11.95.
- OHRS    *The Oxford Handbook of Religion and Science*, ed. by Philip Clayton and Zachary  
Simpson. Oxford and New York: Oxford University Press, 2006.  
ISBN 0-19-9279278-6. Hardbound 2006 or Paperback 2008 okay: Amazon \$62.

- OMNU *On the Moral Nature of the Universe: Theology, Cosmology, and Ethics*.  
Nancey Murphy and George F.R. Ellis. Minneapolis: Fortress, 1996.  
ISBN 0-8006-2983-3. Amazon \$22.16.
- RS *Religion and Science*, by Ian G. Barbour. New York: Harper, 1997.  
ISBN 0-06-060938-9. Amazon \$14.11.

Students may acquire reading materials from any source  
One source is [http://www.ctns.org/pub\\_books.html](http://www.ctns.org/pub_books.html).

### Recommended Readings

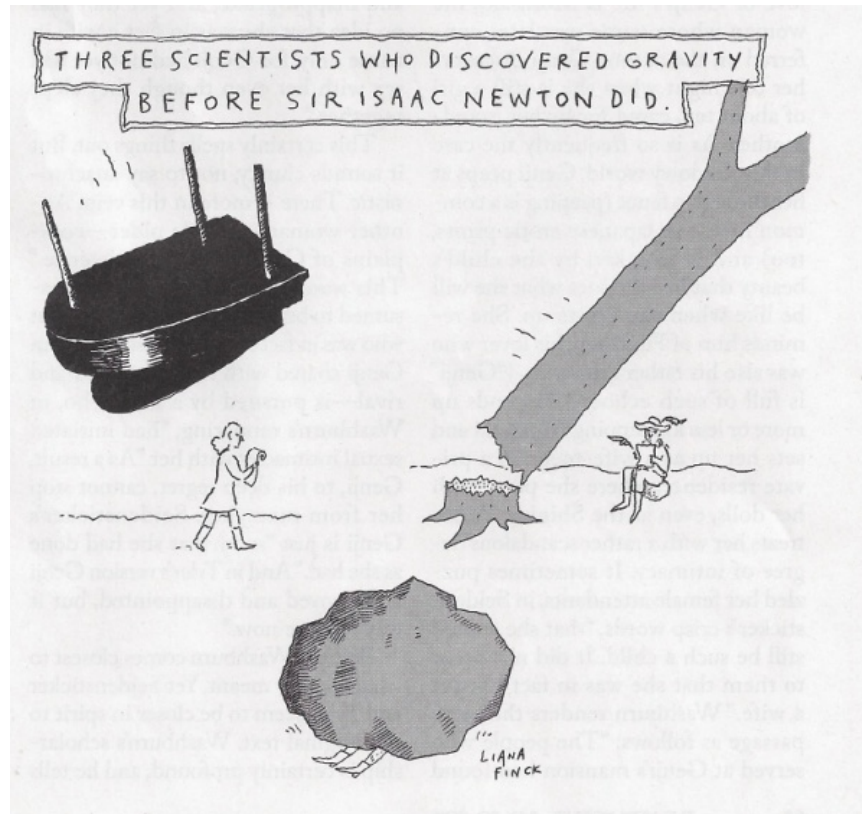
- FP *Faith of a Physicist* by John Polkinghorne. Princeton, 1994. ISBN 0-691-03620-9.
- NCT *A New Climate For Theology: God, the World, and Global Warming*, by Sallie McFague. Minneapolis: Fortress, 2008. ISBN 13: 978-0-8006-6271-4 (pbk)
- PG *Playing God? Genetic Determinism and Human Freedom*. Ted Peters. London: Routledge, 2nd ed., 2003. ISBN 0-415-94248-9-0-415-942249-7
- RSD Lisa L. Stenmark, *Religion, Science and Democracy: A Disputational Friendship*. New York: Rowan and Littlefield, Lexington Books, 2013.  
ISBN 978-0-7391-4286-8.
- SR *Science and Religion: Beyond Warfare and Toward Understanding*. Joshua Moritz. Winona MN: Anselm Academic, 2016. ISBN 978-1-59982-715-5. \$31.95.
- UDA *Unlocking Divine Action: Contemporary Science and Thomas Aquinas*. Michael J. Dodds, O.P. Washington DC: Catholic University Press of America, 2012. ISBN 978-0-8132-1989-9. \$34.95.
- TB For *Theological Briefs*, go to [tedstimelytake.com](http://tedstimelytake.com)...Theological Briefs  
<http://tedstimelytake.com/theological-briefs/> . Best to download and read a hard copy.
- TS *Theology and Science*. Journal published by CTNS at the GTU.  
*Zygon*. Journal published by LSTC.

### Additional Readings

Watch the Moodle Course schedule for links to readings

### Final Course Grade

- General Class Discussion = 10%
- Class Presentations = 20%
- Final Paper = 70%
- Shiny Red Apples = 0%



## Weekly Schedule

# CALENDAR

Fall 2019

Thursdays, 2:10 - 5:00pm, Hedco

### September 5: Theology & Science: Where Are We? Part One

Bob: Introduction to the field of Theology & Science and place of CTNS at the GTU

Ted: Introduction to the Course / Lecture on Ways of Relating Theology & Science

Required Reading:

RS, Barbour, Chapter 4, pp. 77-105, "Ways of Relating Science & Religion"

Bob Russell, "Bridging Science & Religion: Why It Must Be Done"

[http://ctns.org/about\\_history.html](http://ctns.org/about_history.html)

Ted Peters, "Science and Religion: Ten Models of War, Truce, and Partnership," *Theology and Science* 16: 1 (2018) 1-43. DOI 10.1080/14746700.2017.1402163. Article ID: RTAS 1402163 .

<http://dx.doi.org/10.1080/14746700.2017.1402163>

September 12: Theology & Science: Where Are We? Part Two

Ted finishes lecturing on Ten Models for Theology 'n' Science

Required Reading:

OHRs 5 Nasr, "Islam and Science"

OHRs 8 Atkins, "Atheism and Science"

OHRs 3 Samuelson, "Judaism and Science"

Russell, "Theology and Science: Current Issues and Future Directions"

[http://ctns.org/russell\\_article.html](http://ctns.org/russell_article.html)

Recommended Reading:

SR, Moritz, Intro, Chapters 1,4,9

OHRs 1 Menon, "Hinduism and Science"

OHRs 2 Wallace, "Buddhism and Science"

SRD Stenmark for postmodern/critical approach

Catherine Newell, "From Conflict to Wonder: Recent Literature in Science and Religion,"

*Religious Studies Review* 4:4 (December 2018) 389-393.

Ted Peters, "Public Theology: Its Pastoral, Apologetic, Scientific, Political, and Prophetic Tasks,"  
*International Journal of Public Theology* 12:2 (2018) 153-177;

<https://brill.com/abstract/journals/ijpt/12/1/ijpt.12.issue-1.xml>

Biologos Basic Videos, <https://biologos.org/biologos-basics-videos/>

Student on Atkins \_\_\_\_\_

Student on Nasr \_\_\_\_\_

Student on Samuelson \_\_\_\_\_

Each student presenter will be given 5 minutes (only 5 minutes max!) to present to the class the answer to these two questions: (1) what is one central point the author makes that you deem important? (2) which model--selected from either Barbour's 4 models or Peters 8 models--does this author assume or advocate? No discussion will take place until every student presenter has spoken. Then, all the articles will be discussed by the entire class.

September 19: Big Bang, Quantum Physics, Creation and Divine Action

Bob lectures on Big Bang, quantum physics, creation and divine action

Req.: CAO Intro, Chapters 1, 4, 5, 6

OHRs 44 Ellis, "Physics, Complexity, and the Science-Religion Debate"

OHRs 9 Carr, "Cosmology and Religion"

Rec: OHRs 10 Wegter-McNelly; "Fundamental Physics and Religion"

George Ellis, *How Can Physics Underlie the Mind?* Springer, 2016

"What Religion can Learn from Science" [http://ctns.org/pub\\_articles.html](http://ctns.org/pub_articles.html)

"What Science can Learn from Religion" [http://ctns.org/pub\\_articles.html](http://ctns.org/pub_articles.html)

September 26: Evolution: Who's Fighting with Whom about What?

Ted lectures on the evolution controversy

Req: CBGE *Can You Believe in God and Evolution?* Entire Book.

OHRs 41 Haught, "God and Evolution"

Rec: OHRs, 50 Goodenough and Deacon, "The Sacred Emergence of Nature"

OHRs 42 Dembski, "In Defense of Intelligent Design"

OHRs 21 Bracken, "Contributions from Philosophical Theology & Metaphysics"

Visit websites representing Scientific Creationism and Intelligent Design

October 3: Contributions of Ian G. Barbour

Bob leads the discussion on Ian Barbour's writings on Science and Religion

Req: RS Chapters (4), 5, 7, 8, 9, 10, 11, 12

Russell, "Ian G. Barbour (1923-2013): *In Memoriam* to the Pioneer of Science and Religion"

Rec: RS remainder

Peters, "Cult Books Revisited: Ian Barbour's *Issues in Science and Religion*" *Theology* 120:3

(2017) 163-171. DOI: 10.1177/0040571X16684417. <http://journals.sagepub.com/eprint/32gH8m4Xvr9YMSYhYiYg/full>

Key Figures and Developments in the Science-Religion Debate

[http://ctns.org/pub\\_articles.html](http://ctns.org/pub_articles.html)

Student #1 on Barbour, Chapter 7 \_\_\_\_\_

Student #2 on Barbour, Chapter 9 \_\_\_\_\_

Student #3 on Barbour, Chapter 12 \_\_\_\_\_

Each student presenter will be given 20 minutes to lead the class discussion. The first 5 minutes (only 5 minutes!) will be given to a summary of what the author has said. The student presenter will then open up discussion with one or two questions and then guide the discussion.

Oct 10: Ecology, Theology, and Ethics

Ted will open with remarks on the history of Futurology & Ecology

Req: OHRs 52 Celia Deane-Drummond, "Theology, Ecology, and Values"

OHRs 41 Holmes Rolston III, "Environmental Ethics and Religion/Science"

OHRs 42 Nancy Howell, "*Homo sapiens* and Other Animals"

Rec: NCT McFague, pp.1-176

Visit <http://emergenceinitiatives.com/apprenticeships/leaders>

Pope Francis, *Laudato Si*,

[http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html)

Ted Peters, "Anticipating the Renewal of the Earth: Theology and Science in *Laudato Si*," ed., John Clapper, *Interface Theology* 1:2/2015 (Adelaide: ATF Press, 2017) 31-44.



Student on McFague\_\_\_\_\_

Student on Deane-Drummond\_\_\_\_\_

Student on Rolston\_\_\_\_\_

Student on *Laudato Si*\_\_\_\_\_

Each student presenter will be given 20 minutes to lead the class discussion. The first 5 minutes (10 minutes if necessary) will be given to a summary of what the author has said. The student presenter will then open up discussion with one or two questions and then guide the discussion.

Oct. 17: Contributions of Arthur Peacocke

Bob leads a discussion of Arthur Peacocke

Req: ATI pp. 3-56; Responses by Clayton, Drees, Hefner, Murphy, Russell, and Ward; Reflections and *Nunc Dimittis* by Peacocke

OHRs 7 Drees, "Religious Naturalism and Science"

OHRs 33 Hefner, "Religion-and-Science"

Rec:

Russell, "Theology and Science: Current Issues and Future Directions"

[http://ctns.org/pub\\_articles.html](http://ctns.org/pub_articles.html)

Student on Drees\_\_\_\_\_

Student on Hefner\_\_\_\_\_

Each student presenter will be given 20 minutes to lead the class discussion. The first 5 minutes (10 minutes if necessary) will be given to a summary of what the author has said. The student presenter will then open up discussion with one or two questions and then guide the discussion.

Oct. 24 No Class Meeting: Reading Week

Oct. 31: Contributions of John Polkinghorne & Michael Dodds [Reformation Day]

2:10 Bob leads the discussion on Polkinghorne

3:30 Guest Presenter: Michael Dodds

Req:

OHRs 4 Polkinghorne, "Christianity and Science"

UDA, Dodds, pp. 119-159

Rec:

FP Polkinghorne

November 7 CRISPR Gene Editing, Enhancement Ethics, and Transhumanism

Guest presenter: Arvin Gouw

2:10 CRISPR Gene Editing

3:30 Transhumanism

Req: OHRS 54, Ron Cole-Turner, "Biotechnology..."  
Arvin Gouw on CRISPR/Cas9  
Ted Peters, "Should CRISPR Scientists Play God?" *Religions* 8:61 (2017) .  
doi:10.3390/rel8040061; <http://www.mdpi.com/2077-1444/8/4/61/html> .  
Natasha Vita-More, "History of Transhumanism"  
Nick Bostrom, "Transhumanism"  
Rec: PG, Peters on Playing God  
Theologians Testing Transhumanism <https://theologyandtranshumanism.weebly.com/>  
Peters, "*Imago Dei*, DNA, and the Transhuman Way"  
<https://www.tandfonline.com/eprint/GQ7dfNNtqJnf7buZx2dD/full>  
Peters, "When Do We edit the Human Genome? A Question for the Theologian and the  
Ethicist?" Berkley Center for Religion, Peace, and World Affairs, Georgetown University  
(April 22, 2019) <https://berkeleycenter.georgetown.edu/responses/when-do-we-edit-the-human-genome-a-question-for-the-theologian-and-ethicist>

#### Nov. 14 On the Moral Nature of the Universe

Bob lectures

Req:

OMNU, Murphy & Ellis, Chapters 1,3,5,6,8,9,10

CAO Russell, Chapter 7 on entropy and evil

November 21: No Class Meeting: AAR/SBL San Diego

November 28: No Class Meeting: Thanksgiving Holiday

#### December 5: Astrotheology & Astroethics

Bob and Ted introduce the project

Req:

Ast 1 Peters, "Introducing Astrotheology"  
2 Peters, "The Tasks of Astrotheology"  
4 Russell, "Discovering ETI...Philosophical and Theological Implications?"  
7 Wiseman, "Exoplanets and the Search for Life Beyond Earth"  
8 Manning, "...Drake Equation..."  
16 Peters, "One Incarnation or Many?"  
17 Russell, "Many Incarnations or One?"  
21 McKay, "Astroethics and the Terraforming of Mars"

Rec:

Deb Haarsma, Biologos Video, "Aliens and Human Significance"

<https://biologos.org/resources/aliens-and-human-significance-deb-haarsma>

Student on 7 Wiseman \_\_\_\_\_

Student on 8 Manning \_\_\_\_\_

Student on 21 McKay \_\_\_\_\_

Each student presenter will be given 20 minutes to lead the class discussion. The first 5 minutes (10 minutes if necessary) will be given to a summary of what the author has said. The student presenter will then open up discussion with one or two questions and then guide the discussion.

December 12 Student Research Reports Student reports on term papers

December 19 TERM PAPERS Due (no class meeting)

Please submit your term paper as an email attachment no later than 12:30 noon.

### **Plagiarism**

Plagiarism is the presentation of another's ideas, methods, research, or words without proper acknowledgement. It runs the gamut from failing to cite a reference (sloppy scholarship), to passing off another's work as one's own. It includes close paraphrasing as well as lifting of entire lines nearly verbatim without acknowledgement. As the effects of the plagiarism will be the same regardless of intent, intent will not be construed as essential to the act, although it may be considered in determining whether the charge of plagiarism should be pursued or what the penalty may be. For general requirements for proper acknowledgement in written work, see the most current edition of Kate Turabian, *Manual for the Writers of Term Papers, Theses, and Dissertations* and *The Chicago Manual of Style*.

### **Arrangements in Cases of Documented Disability**

If you will need special arrangements for meeting course requirements for reasons of documented disability, please speak to one of the instructors very early in the term so that appropriate arrangements can be made. A description of the GTU policy regarding accommodation for differently abled students is online at:

<http://gtu.edu/admissions/life-at-gtu/students-with-disabilities>

### **Honor Code**

Students in all courses and phases of the Doctoral Program are subject to the GTU Honor Code, described on p. 15 of the on-line Student Handbook. Please note: "Documented evidence that a student has violated the honor code may result in immediate expulsion from the program."

### **Other GTU Policies**

Students and faculty in required Doctoral Seminars are also subject to GTU Institutional Policies, detailed on pp. 54 ff. in the on-line Student Handbook, including: Non-discrimination, AIDS non-discrimination, and Drug Free Environment (52), Inclusive Language (54), Plagiarism (55 ff.), Exceptions and Accommodations (63 ff.), and Sexual Misconduct (65 ff.).