

Syllabus for
HONR 412/PHIL 299 – Philosophy of Science
3.0 Credit Hours
Spring 2022

For information concerning classroom participation opportunities, please refer to the Fall 2021/Spring 2022 Health and Safety Guidelines, found at <https://oru.edu/campus-health/>, specifically pages 12 and 13.

I. COURSE DESCRIPTION

A basic study of the philosophy of science, which includes a general understanding of philosophy and its impact on natural sciences. Emphasizes the science and philosophy of origins, scientific ethics, Western scientific thought and its impact on Christian thought and practice, and the formulation of a charismatic, evangelical response and perspective on the Western scientific enterprise. (This course may substitute for HUM 214)

Restriction: Honors Fellow or Scholar standing or theological-historical studies major with a Christian philosophy concentration.

II. STUDENT LEARNING OUTCOMES FOR THIS COURSE

After completing this course successfully, students will be able to:

- A. BV Outline a brief history of scientific philosophy and the process of developing the present definition and philosophy of Western science
- B. PR Define science as religion, methodological naturalism, non-methodological naturalistic-based science, pre-modern scientific worldviews, and modern scientific worldviews, and assess the strengths and weaknesses of each
- C. IP Describe and explain naturalism, Darwinism, young earth creationism, old earth creationism, intelligent design in cosmology, biology, biochemistry, and information theory
- D. GE Assess and discuss the influence of scientific philosophy on research ethics, public dissemination of scientific knowledge, the influence of scientific discoveries on theological thought, governmental policies, and modern Western civilization
- E. SI Explain a personal apologetic Christian scientific position and worldview

III. ASSOCIATED PROGRAMS

This course meets degree completion requirements for the Honors and the Historical and Philosophical Theology programs and allows additional students to fulfill an SIC general education elective requirement.

- A. Historical Philosophical Theology (HPTH)
 - a. Outcome 1- Students will master the use of critical thinking skills in the context of the disciplines of historical and philosophical theology.
 - b. Outcome 2- Students will develop a capacity for assessing appropriate information for reliability, bias, and relevance.
 - c. Outcome 3- Students will master research methods and produce research papers and class presentations which comply with academic style guidelines.

IV. UNIVERSITY OUTCOMES

This course aligns with the following University Outcomes as indicated on the last page

- Spiritual Integrity – Student Learning Outcome E
- Personal Resilience – Student Learning Outcome B
- Intellectual Pursuit – Student Learning Outcome C

- Global Engagement – Student Learning Outcome D
- Bold Vision – Student Learning Outcome A

V. TEXTBOOKS

A. Required Materials

- Axe, Douglas. *Undeniable: How Biology Confirms Our Intuition That Life is Designed*. New York: HarperOne, 2016. ISBN 9780062349583
- Behe, Michael J. *Darwin's Black Box: The Biochemical Challenge to Evolution*. New York: The Free Press, 1996. ISBN 9780743290319
- Collier, William B. *From Darwin to Eden: A Tour of Science and Religion based on the Philosophy of Michael Polanyi and the Intelligent Design Movement*. Eugene, Oregon: Resource Publications, Wipf and Stock Press, 2020. ISBN 9781532692710.
- Heeren, Fred. *Show Me God: What the Message From Space is Telling Us About God*. Wheeling, IL: DayStar Publ., 1998. ISBN 9781885849533
- Johnson, Phillip E. *Reason in the Balance: The Case Against Naturalism in Science, Law, and Education*. Downers Grove: IVP, 1995. ISBN 0830819290
- Polanyi, Michael. *Science, Faith, and Society*. Chicago: University of Chicago Press, 1964. ISBN 9780226672908

B. Optional Materials (Recommended)

- Davies, Paul. *God and the New Physics*. NY: Touchstone, 1984. ISBN 9780671528065
- Hummel, Charles. *The Galileo Connection: Resolving Conflicts Between Science and the Bible*. Downers Grove: IVP, 1986. ISBN 087784500X
- Jaki, Stanley L. *Patterns or Principles?* Wilmington, DE: ISI Books, 1995. ISBN 1882926099
- Jaki, Stanley L. *The Limits of a Limitless Science*. Wilmington, DE: ISI Books, 2000. ISBN 1882926463
- Johnson, Phillip E. *Darwin on Trial*. Downers Grove: IVP, 1993. ISBN 9780830813247
- Johnson, Phillip E. *Defeating Darwinism*. Downers Grove: IVP, 1997. ISBN 9780830813605
- Rosenberg, Jay F. *The Practice of Philosophy: A Handbook for Beginners*. Upper Saddle River: Prentice Hall, 1996. ISBN 978-0132-308489

VI. POLICIES AND PROCEDURES

A. Department Policies and Procedures

1. Completion of a Course
 - a. Late work will not be accepted. Assignments are due on or before the deadline given
 - b. Under rare circumstances, exceptions may be made in consultation with the faculty member for the course. However, except in extreme emergencies, students must contact faculty members before the assigned due date and request an exception to the policy.
2. Incompletes
 - a. An incomplete is given only after the student establishes with the instructor and the department chair by written petition that his or her work is incomplete for good cause (i.e., lengthy illness, death in the family). **Incompletes are rarely granted.** Only those absences that are incurred within the time period of the extenuating circumstances prompting an incomplete will be excused.
 - b. A Petition for Incomplete Grade with all supporting documentation must

be submitted for approval at least one week prior to the end of normal classes. The submitting of a petition does not automatically ensure the granting of an incomplete. The petition must be approved by the appropriate academic committee of the Undergraduate Theology Department.

3. Examinations and Other Assignments
 - a. Early examinations **are not** allowed.
 - b. Late examinations are administered only when extenuating circumstances are present (such as a death in the family the week before exams, sudden and major illness the week of exams that is documented by a physician). In fairness to all students, some persons should not have more time to prepare for an examination than others. **The granting of a late examination request is rare.**
 - c. A Petition for Late Examination without penalty must be signed by the professor and the chair. Proper documentation must accompany the petition and must be submitted to the Undergraduate Theology Department. The student must schedule the makeup exam with the professor of the course. The exam must be taken no later than five (5) calendar days after the approval of the petition or the last day of final examinations. **Grade penalties may be applied as indicated by the Academic Affairs Committee.**
 - d. **All** exams will be given as scheduled. It is the student's responsibility when purchasing airline tickets, for example, to take this schedule into consideration. **Not being present for the final examination automatically results in failure of the course.**
 - e. These requirements apply to all quizzes, tests, and examinations administered by the Undergraduate Theology Department.

4. Self-Plagiarism Policy
Students cannot reuse part or all of an assignment from another course without written permission from the current instructor/faculty member. This is considered self-plagiarism and therefore goes against ORU's policies against plagiarism.

B. Course Policies and Procedures

1. Attendance
 - a. As this class meets twice a week, the missing of 4 class sessions will result in a grade reduction of one letter grade. Missing 8 sessions will automatically result in a grade of "F."
 - b. The absences allowed prior to grade reduction are designed to allow for emergencies and illnesses, and are not designed for indiscriminate use. Many students incorrectly assume that they may use these allowable absences as unexcused "cuts" from class. Administrative excuses are granted only when a student is on official University business and has received approval in advance from the University administration.
 - c. Students are expected to be prompt for classes. Two tardies will equal one absence.
2. Evaluation Procedures
 - a. Course Evaluations

8 written reflections	40%
2 verbal tutorials	25%
Final Exam (paper)	25%

Class Participation/Attendance 10%
TOTAL 100%

- b. Whole Person Assessment Requirements
The Final Exam paper will be uploaded for assessment.
- c. Grade Scale:
90+ = A; 80+ =B; 70+ = C; 60+ = D; 59- =F
(see handout, “Grading Criteria for Theological Courses”)

COURSE CALENDAR

Preliminary Spring 2022 Lecture - Discussion Schedule

<u>Week</u>	<u>Date</u>	<u>Tuesday Lecture</u>	<u>Thursday Discussions</u>
1	Jan 13		Intro to Course Video – <i>Cosmos</i> - Carl Sagan
2	Jan 18, 20	Nature of Philosophy and Science Dr Samuel Thorpe, Theology	Doing philosophy
3	Jan 25, 27	Jesus is THE Thesis: A Christocentric Apologetic Dr Jeff Voth	<i>Reason in the Balance</i> Ch 1-5 Phillip Johnson <i>Reason in Balance</i> reflection 1 due
4	Feb 1, 3	Epistemology of Christianity Rev Gyle Smith	Epistemology and Critical Thinking <i>From Darwin to Eden</i> , Ch 1,2 reflection 2 due
5	Feb 8, 10	Metaphorical Language of Science Dr Lori Kanitz (Skype) <i>Class will be held in GLC 103</i>	Use of language and method <i>Science, Faith, Society</i> reflection 3 due
6	Feb 15, 17	Polanyi’s Scientific Philosophy and Its Implications Dr Bill Collier, Chemistry	<i>From Darwin to Eden</i> , Ch 3,4 reflection 4 due
7	Feb 22, 24	Video- <i>Show Me God</i>	<i>Show Me God</i> , Ch 1-6 Fred Heeren <i>Show Me God</i> -1 st half reflection 5 due
8	Mar 1, 3	The Anthropic Principle: Why the Universe is the Way It Is Dr Andrew Lang, Mathematics	<i>Show Me God</i> , Ch 6-12 Fred Heeren <i>Show Me God</i> -2 nd half reflection 6 due
9	Mar 8, 10	Video - <i>The Privileged Planet</i>	Science as Reverse Engineering Dr Dominic Halsmer <i>From Darwin to Eden</i> , Ch 5,6,8 read
Spring Break			
10	Mar 22, 24	Groups 1,2,3 have graded tutorial with Dr Voth and Dr Collier On FDE Ch 5,6,8 and semester to date	Groups 4,5,6 have graded tutorial with Dr Voth and Dr Collier On FDE Ch 5,6,8 and semester to date
11	Mar 29, 31	Intelligent Design: Irreducible Complexity Dr Bill Collier, Chemistry	Questions and FDE - <i>Show models</i> Discuss <i>Darwin’s Black Box</i>
12	Apr 5, 7	Video – <i>The Cambrian Explosion</i> <i>Final Term Paper</i> due date TBA	Biochemistry Dr Bill Ranahan, Biology <i>Darwin’s Black Box</i> reflection 7 due Read <i>Undeniable</i>
13	Apr 12, 14	Evolution Dr Hal Reed, Biology	<i>Turing Machines and Biology</i> Jonathan Bartlett Read FDE 9,10,11
14	Apr 19, 21	Groups 1,2,3 have graded tutorial with Dr Voth and Dr Collier on FDE 9,10,11, <i>Undeniable</i> , last two videos	Groups 4,5,6 have graded tutorial Dr Voth and Dr Collier on FDE 9,10,11, <i>Undeniable</i> , last two videos
15	Apr 26	<i>Final Exam</i>	Course summation and conclusion

Primary Program: Historical and Philosophical Theology
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This course contributes to the University and program outcomes as indicated below:

Significant Contribution – Addresses the outcome directly and includes targeted assessment.

Moderate Contribution – Addresses the outcome directly or indirectly and includes some assessment.

Minimal Contribution – Addresses the outcome indirectly and includes little or no assessment.

OUTCOMES	Significant	Moderate	Minimal
Spiritual Integrity			
E – Explain a personal apologetic Christian scientific position and worldview	X		
HPTH Outcome 2- Students will develop a capacity for assessing appropriate information for reliability, bias, and relevance.	X		
Personal Resilience			
A – Outline a brief history of scientific philosophy and the process of developing the present definition and philosophy of Western science	X		
HPTH Outcome 3- Students will master research methods and produce research papers and class presentations which comply with academic style guidelines.	X		
Intellectual Pursuit			
C – Describe and explain naturalism, Darwinism, young earth creationism, old earth creationism, intelligent design in cosmology, biology, biochemistry, and information theory	X		
HPTH Outcome 1- Students will master the use of critical thinking skills in the context of the disciplines of historical and philosophical theology.	X		
Global Engagement			
D – Assess and discuss the influence of scientific philosophy on research ethics, public dissemination of scientific knowledge, the influence of scientific discoveries on theological thought, governmental policies, and modern Western civilization	X		
HPTH Outcome 2- Students will develop a capacity for assessing appropriate information for reliability, bias, and relevance.	X		
Bold Vision			
B – Define science as religion, methodological naturalism, non-methodological naturalistic-based science, pre-modern scientific worldviews, and modern scientific worldviews, and assess the strengths and weaknesses of each	X		
HPTH Outcome 2- Students will develop a capacity for assessing appropriate information for reliability, bias, and relevance.	X		