

HUMN550

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

Course Summary

Course : HUMN550 **Title :** Evolution of Earth and Universe

Length of Course : 8

Prerequisites : N/A **Credit Hours :** 3

Description

Course Description: This course provides study of the logic and methods of science in relation to the development of the universe. It addresses the path by which scientific description of the universe has been made possible. It covers the origin of the universe, the nature of reality, and the relationship between observer and nature. Course topics include cosmology and the future of the human race. Readings for this course include Stephen Hawking's A Brief History of Time and other emerging relevant contemporary documents.

Course Scope:

This course is organized to give students a broad overview of the theories, over time, of scientific cosmology and the history of earth and the universe. The course is concerned with acquiring expertise in evaluating those theories. The specific objective of the course is to achieve knowledge levels within the students such that they will be able to perform satisfactorily or better in essays, online forums, and presentations (students will be expected to create a narrated PowerPoint or video presentation of their research).

Objectives

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

- CO-1: Apply appropriate graduate-level analytical, research and writing skills in essays.
- CO-2: Compare and contrast the contributions of the major theorists on the evolution of the Earth and Universe.
- CO-3: Assess competing theories on the nature of time and the implications of time travel, should it ever prove feasible.
- CO-4: Assess and critique the validity and implications of the Copernican Principle for making scientific predictions about the future.
- CO-5: Synthesize the concepts in this course with independent research to produce graduate level essays and presentations.

Outline

Week 1: Introduction to Cosmology: The Heroic Age and the Dark Interlude

Learning Outcomes

CO-2, CO-3

- Define "cosmology," as it was understood by Neolithic humans.
- Assess the contributions made by the Egyptians, Mesopotamians, and Babylonians.
- Identify what contribution the ancient Greeks made to the field, particularly in the work of Pythagoras, Plato, and Aristotle.
- Identify what tools the ancients used.
- Articulate the concepts they developed in their labors.

Required Readings

Week 1 Lesson

Website:

"History of Cosmology": <http://abyss.uoregon.edu/~js/ast123/lectures/lec01.html>

"Cosmic Journey: A History of Scientific Cosmology": <http://www.aip.org/history/cosmology/>

Pythagoras: <http://plato.stanford.edu/entries/pythagoras/>

Choose one of the following to read closely; skim the other:

Plato, *Timaeus*: <http://classics.mit.edu/Plato/timaeus.html>

Aristotle, *On the Heavens*: <http://classics.mit.edu/Aristotle/heavens.html>

Assignments

- Introduction Forum (Initial post due Thursday, peer replies due Sunday)
- Week 1 Forum (Initial post due Thursday, peer replies due Sunday)

Week 2: Nicholas Copernicus, Johannes Kepler, and Tycho Brahe

Learning Outcomes

CO-1, CO-2, CO-4, CO-5

- Assess and critique the validity and implications of Copernicus' discoveries for making scientific predictions about the future.
- Evaluate the contributions of Copernicus on the evolution of the Earth and Universe.
- Assess and critique the validity and implications of Kepler's discoveries for making scientific predictions about the future.
- Evaluate the contributions of Kepler on the evolution of the Earth and Universe.
- Discuss the work of Tycho Brahe.

Required Readings

Week 2 Lesson

Website:

Nicholas Copernicus, *On the Revolution of the Heavenly Spheres*: <http://www.webexhibits.org/calendars/year-text-Copernicus.html>

Johannes Kepler, *Harmonies of the World*: <http://www.sacred-texts.com/astro/how/index.htm>

"Tycho Brahe" <http://galileo.rice.edu/sci/brahe.html>

Assignments

- Assignment #1: Paper Proposal
- Week 2 Forum participation

Week 3: Galileo Galilei

Learning Outcomes

CO-1, CO-2, CO-5

- Apply appropriate graduate-level analytical, research and writing skills in essays.
- Compare and contrast the contributions of the major theorists on the evolution of the Earth and Universe.
- Synthesize the concepts in this course with independent research to produce graduate level essays and presentations.
- Assess and critique the validity and implications of Galileo's discoveries for making scientific predictions about the future.
- Evaluate the contributions of Galileo to our understanding of the evolution of the Earth and Universe.

Required Readings

Week 3 Lesson

Website: Galileo Galilei, *Dialogues Concerning Two New Sciences*: http://galileoandeinstein.physics.virginia.edu/tns_draft/index.html

Assignments

- Assignment #2: Literature Review
- Week #3 Forum

Week 4: Sir Isaac Newton

Learning Outcomes

CO-1, CO-2, CO-3

- Apply appropriate graduate-level analytical, research, and writing skills in essays.
- Compare and contrast the contributions of the major theorists on the evolution of the Earth and Universe.
- Assess competing theories on the nature of time and the implications of time travel, should it ever prove feasible.
- Assess and critique the validity and implications of Newton's discoveries for making scientific predictions about the future.
- Evaluate the contributions of Newton on our understanding of the evolution of the Earth and Universe.

Required Readings

Week 4 Lesson

Website: Sir Isaac Newton, *Principia Mathematica*: <http://www.archive.org/details/Newtonspmathema00newtrich>

Assignments

- Assignment #3: Research design/Methodology
- Week #4 Forum

Week 5: Albert Einstein

Learning Outcomes

CO-2, CO-3

- Compare and contrast the contributions of the major theorists on the evolution of the Earth and Universe.
- Assess competing theories on the nature of time and the implications of time travel, should it ever prove feasible.
- Assess and critique the validity and implications of Einstein's discoveries for making scientific predictions about the future.
- Evaluate the contributions of Einstein on our understanding of the evolution of the Earth and Universe.

Required Readings

Week 5 Lesson

Website: Albert Einstein, *The Principle of Relativity*: <http://www.gutenberg.org/etext/5001>

Assignments

- Week 5 Forum

Week 6: Stephen Hawking

Learning Outcomes

CO-1, CO-2, CO-3, CO-5

- Apply appropriate graduate-level analytical, research and writing skills in essays.
- compare and contrast the contributions of the major theorists on the evolution of the Earth and Universe.
- Assess competing theories on the nature of time and the implications of time travel, should it ever prove feasible.
- Synthesize the concepts in this course with independent research to produce graduate level essays and presentations.
- Assess and critique the validity and implications of Hawking's discoveries for making scientific predictions about the future.
- Evaluate the contributions of Hawking on our understanding of the evolution of the Earth and Universe.

Required Readings

Week 6 Lesson

Website: Stephen Hawking, *Lectures*: <http://www.hawking.org.uk/>

Assignments

- Assignment #4: Abstract
- Week 6 Forum

Week 7: Time and the Possibility of Time Travel

Learning Outcomes

CO-1, CO-3, CO-5

- Apply appropriate graduate-level analytical, research and writing skills in essays.
- Assess competing theories on the nature of time and the implications of time travel, should it ever prove feasible.
- Synthesize the concepts in this course with independent research to produce graduate level essays and presentations.
- Evaluate the contributions of Gott on our understanding of the evolution of the Earth and Universe.

Required Readings

Week 7 Lesson

Text: J. Richard Gott, *Time Travel In Einstein's Universe*

Assignments

- Assignment #5: Final Paper
- Week 7 Forum

Week 8: Looking into the Future

Learning Outcomes

CO-1, CO-3, CO-4, CO-5

- Apply appropriate graduate-level analytical, research and writing skills in essays.
- Assess competing theories on the nature of time and the implications of time travel, should it ever prove feasible.
- Assess and critique the validity and implications of the Copernican principle for making scientific predictions about the future.
- Synthesize the concepts in this course by presenting your research.
- Evaluate the contributions of Barbour on the evolution of the Earth and Universe.

Required Readings

Week 8 Lesson

Text: Julian Barbour, *The End of Time: The Next Revolution in Physics*

Assignments

- Assignment #6: PowerPoint or Video Presentation
 - Week 8 Forum
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Evaluation

The course is based on substantial Lesson content each week, Reading Assignments, forum discussions, and formal written assignments. Your Forum posts and responses and written paper/presentation will indicate how well you have read the materials and should refer to both the lessons and other readings when you post and reply to peers. There is a forum for each week of class, and participation is required during the week of the forum. The final paper is broken down into various components to be completed throughout the course, including a lit review, abstract, etc. As you write and develop these various parts, please keep in mind that they should all come together in the end, in the form of a research proposal and presentation.

Grading:

Name	Grade %
Forums	25.00 %
Introduction Forum	2.78 %
Week 1 Forum	2.78 %
Week 2 Forum	2.78 %
Week 3 Forum	2.78 %
Week 4 Forum	2.78 %
Week 5 Forum	2.78 %
Week 6 Forum	2.78 %
Week 7 Forum	2.78 %
Week 8 Forum	2.78 %
Final Project	75.00 %
Week 2: Final Project Proposal	7.50 %
Week 3: Final Project Literature Review	7.50 %
Week 4: Final Project Research Design/Methodology	7.50 %
Week 6: Final Project Abstract	7.50 %
Week 7: Final Paper Proposal or Report	26.25 %
Week 8: Final Project - Presentation	18.75 %

Materials

Book Title: The End of Time: The Next Revolution in Physics

Author: Barbour, Julian

Publication Info: Oxford University Press

ISBN: 9780195145922

Book Title: The Universe in A Nutshell - alternate sources available online at <http://www.hawking.org.uk/the-universe-in-a-nutshell.html>

Author: Stephen Hawking

Publication Info: Bantam, 2001

ISBN: 9780553802023

Book Title: Time Travel in Einstein's Universe

Author: Gott, Richard

Publication Info: HM

ISBN: 9780618257355

Book Title: On the Shoulders of Giants: The Great Works of Physics and Astronomy - alternate sources available online at <http://www.webexhibits.org/calendars/year-text-Copernicus.html>, <http://www.sacred-texts.com/astro/how/index.htm>

Author: Hawking, S

Publication Info: Running Press Book Publishers

ISBN: 9780762416981

Book Title: add'l alternate sources available online at:
http://galileoandinstein.physics.virginia.edu/tns_draft/index.html,
<http://members.tripod.com/~gravitee/toc.htm>, <http://www.bartleby.com/173/>

Author:

Publication Info: Open Web Sources

ISBN: AMN

Required Course Textbooks: In addition to the required online readings, two texts are required for this course:

Barbour, Julian. *The End of Time: The Next Revolution in Physics*. New York: Oxford University Press, 1999. ISBN: 0-19-514592-5

Gott, J. Richard. *Time Travel In Einstein's Universe*. New York: Houghton Mifflin Company, 2001. ISBN: 0-618-25735-7

Required Readings: both textbooks named above and the Websites listed below.

Additional Resources: no other resources are currently required.

Websites:

In addition to the required course texts the following public domain Websites are useful. Please abide by the university's academic honesty policy when using Internet sources as well. Note web site addresses are subject to change.

Site Name Website URL/Address

"History of
Cosmology" <http://abyss.uoregon.edu/~js/ast123/lectures/lec01.html>

- “Cosmic
Journey: A
History of
Scientific
Cosmology” <http://www.aip.org/history/cosmology/>
- Pythagoras <http://plato.stanford.edu/entries/pythagoras/>
- Plato,
Timaeus <http://classics.mit.edu/Plato/timaeus.html>
- Plato,
“Allegory of
the Cave”
from <http://www.historyguide.org/intellect/allegory.html>
- The
Republic*
- Aristotle, *On
the Heavens* <http://classics.mit.edu/Aristotle/heavens.html>
- Nicholas
Copernicus,
*On the
Revolution
of the
Heavenly
Spheres* <http://www.webexhibits.org/calendars/year-text-Copernicus.html>
- Johannes
Kepler,
*Harmonies
of the World* <http://www.sacred-texts.com/astro/how/index.htm>
- “Tycho
Brahe” <http://galileo.rice.edu/sci/brahe.html>
- Galileo
Galilei,
*Dialogues
Concerning
Two New
Sciences* http://galileoandeinstein.physics.virginia.edu/tns_draft/index.html
- Sir Isaac
Newton,
*Principia
Mathematica* <http://www.archive.org/details/newtonspmathema00newtrich>

Albert
Einstein, *The
Principle of
Relativity* <http://www.gutenberg.org/etext/5001>

Stephen
Hawking, <http://www.hawking.org.uk/>
Lectures

J. Richard
Gott *Time Travel In Einstein's Universe* (paper text)

Julian
Barbour *The End of Time: The Next Revolution in Physics* (paper text)

Course Guidelines

Citation and Reference Style

- Students will follow MLA format as the sole citation and reference style used in written assignments submitted as part of coursework to the Humanities Department.
- Please note that no formal citation style is graded on forum assignments in the School of Arts & Humanities—only attribution of sources (please see details regarding forum communication below).

Tutoring

- [Tutor.com](https://www.tutor.com) offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

School of Arts & Humanities Late Policy

Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. As adults, students, and working professionals, I understand you must manage competing demands on your time. Should you need additional time to complete an assignment, please contact me before the due date so we can discuss the situation and determine an acceptable resolution.

Work posted or submitted after the assignment due date will be reduced by 10% of the potential total score possible for each day late up to a total of five days, including forum posts/replies, quizzes, and assignments. ***Beginning on the sixth day late through the end of the course, late work, including forum posts/replies, quizzes, and assignments, will be accepted with a grade reduction of 50% of the potential total score earned.***

Turn It In

Assignments are automatically submitted to Turnitin.com within the course. Turnitin.com will analyze an

assignment submission and report a similarity score. Your assignment submission is automatically processed through the assignments area of the course when you submit your work.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com or Scribd. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc). See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.
- It is the student's responsibility to ensure the all submitted work can be accessed and opened by the instructor.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of a particular group or class.

Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting day/time after which the instructor will grade and provide feedback, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- "Substantive" means comments that contribute something new and important to the discussion. Thus a message that simply says "I agree" is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.
- Students must post a response to the weekly forums prompt and post the required number of replies to other students – refer to the grading rubric and/or forum instructions for specific expectations on number of replies and word count requirements.
- The main response to the forum is due mid-week – refer to the grading rubric and/or forum instructions for specific expectations. Late main response posts to a forum may not be accepted without prior instructor approval.
- Replies must be posted in the week due and replies after the end of the each week may not be graded.

Quizzes and Exams

- Quizzes and exams may consist of true/false, multiple choice, and short essay questions. Each quiz/exam is accessible only once. Once a quiz/exam is accessed, you will not be able to access it again if you disconnect. Therefore, allocate time to complete your quiz. Weekly quizzes must be submitted by midnight Eastern Time, Day 7 of the assigned week. Late quizzes or exams will not be accepted without prior instructor approval.

University Policies

[Student Handbook](#)

- [Drop/Withdrawal policy](#)
- [Extension Requests](#)
- [Academic Probation](#)
- [Appeals](#)
- [Disability Accommodations](#)

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