

Dominican School of Philosophy & Theology  
Philosophy of Nature  
PH 1056  
Fall, 2019  
Mon 12:40 - 3:30, DSPT #1  
Office hours: By appointment

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**Course Description:** *Through readings, class discussions and brief written assignments, the course will provide a philosophical account of the nature of change, including classical insights (Aristotle, Aquinas) and contemporary issues in cosmology, the methods of science and philosophy, the nature of causality, time and infinity.*

**Goals:** *Students will acquire a fundamental knowledge of the Aristotelian-Thomistic account of nature including its roots in classical Greek philosophy and possible applications in contemporary science. They will also acquire a basic grasp of the relationship between philosophy and empirical science.*

**Outcomes:** *Students will be able to explain the Aristotelian-Thomistic account of substance, change and causality. They will be able to explain the philosophical problematic which gave rise to this account and to apply it to contemporary issues regarding the unity of substances (dualism) and the nature of scientific law. They will also be able to discuss the relationship and influence of philosophy upon science and vice versa (Burt, Kuhn, Thomas Aquinas). This will be demonstrated by class discussions, weekly papers, and three essay papers or one research paper.*

- Sep. 9 Introduction
- Sep.16 Change in the Pre-Socratics  
M. Dodds, *The Philosophy of Nature*, 1-4. [This assignment is also posted on Moodle.]  
M. Nahm, *Selections from Early Greek Philosophy*, 31-45, 62-77, 87-103  
Aristotle, *Physics I*, c. 1-2.
- Sep.23 Responses to Parmenides & principles of change  
M. Dodds, *The Philosophy of Nature*, 5-17  
Aristotle, *Metaphysics*, Book I, c. 6 and 9.  
Aristotle, *Physics* Book I, c.3-9.  
Thomas Aquinas, *Commentary on the Physics I*, lecture 14.
- Sep.30 NO CLASS
- Oct. 7 Primary matter and substantial form  
M. Dodds, *The Philosophy of Nature*, 18-23.  
Leo Elders, *The Philosophy of Nature*, p.38-52, 141-44.  
N. A. Luyten, "Matter as Potency"
- Oct.14 Substantial form and nature  
M. Dodds, *The Philosophy of Nature*, 24-28.  
Thomas Aquinas, "The Principles of Nature", chap. 1-2.  
W. Wallace, "Nature as Animating"  
L. Elders, *The Philosophy of Nature*, 52-55.
- Oct.21 READING WEEK
- Oct.28 Composite, nature, generation  
M. Dodds, *The Philosophy of Nature*, 29-41.  
Aristotle, *Physics II*, c.1-2.  
C. Decaen, "Elemental Virtual Presence in St. Thomas"  
M. Dodds, "Top Down, Bottom Up or Inside Out? Retrieving Aristotelian Causality in Contemporary Science"

- Nov.4      Efficient cause (Primary & secondary causality; Principal and instrumental causality)  
               M. Dodds, *The Philosophy of Nature*, 42-49.  
               Aristotle, *Physics*, II, c.3.  
               A. Moreno, "The Law of Inertia"  
               T. Larson, "Natural Motion in Inanimate Bodies"  
               E. Gilson, *The Christian Philosophy of Thomas Aquinas*, 174-86, 466-69.  
               [FIRST ESSAY DUE FOR STUDENTS DOING THE THREE ESSAYS]  
               [PAPER TOPIC DUE FOR THOSE DOING THE 15-20 PAGE PAPER]
- Nov.11      Final cause & chance  
               M. Dodds, *The Philosophy of Nature*, 49-58  
               Aristotle, *Physics* II, c.4-9.  
               Thomas Aquinas, "Principles of Nature," c. 3-4.  
               B. Ashley, "Research into the Intrinsic Final Causes of Physical Things"  
               R. Augros, "Nature Acts for an End"
- Nov.18      Definition of motion, infinity & the continuum  
               M. Dodds, *The Philosophy of Nature*, 59-74.  
               Aristotle, *Physics* III, c.1-3.  
               Leo Elders, *The Philosophy of Nature*, 67-74, 124-135.  
               Kuhn, *The Structure of Scientific Revolutions*, Chapters 1 and 2 (pages 1-22, 1970 edition)
- Nov.25      Place, space and time  
               M. Dodds, *The Philosophy of Nature*, 75-95.  
               L. Elders, *The Philosophy of Nature*, 80-99  
               A. Moreno, "Time and Relativity"  
               J. Weisheipl, "Space and Gravitation"  
               Kuhn, *The Structure of Scientific Revolutions*, Chapters 9 and 10 ( pages 92-135, 1970 edition)  
               [SECOND ESSAY DUE FOR STUDENTS DOING THE THREE ESSAYS]
- Dec.2        Philosophy and empirical science  
               M. Dodds, *The Philosophy of Nature*, 88-95,  
               E.A. Burt, *The Metaphysical Foundations of Modern Science*, 1-22, 300-324  
               Kuhn, *The Structure of Scientific Revolutions*, Chapters 12, 13, and Postscript, sections 5-7  
               (pages 144-73, 198-210, 1970 edition)  
               Wallace, William, "Causality, Analogy and the Growth of Scientific Knowledge"
- Dec.9        FINAL WEEK OF SEMESTER (NO CLASS)  
               [FOR STUDENTS DOING THE THREE ESSAYS, THIRD ESSAY DUE ON DEC. 13]  
               [FOR STUDENTS DOING THE RESEARCH PAPER, PAPER DUE ON DEC. 13]

*ASSIGNED READINGS:*

Michael J. Dodds, *The Philosophy of Nature*. (Oakland, CA: Western Dominican Province, 2010). Available through Lulu.com (paperback or e-book). [\$8.95]

Thomas Kuhn, *The Structure of Scientific Revolutions*. (Chicago: University of Chicago Press, 2012) ISBN: 978-0226458120. [\$15.00] Available through DSPT-amazon.com.

The other readings are available through Moodle.

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*BIBLIOGRAPHY*

A bibliography for the course may be found on the moodle website.

*STRUCTURE:*

The structure of the class is lecture/discussion. Active participation is expected, and this presupposes a careful reading of the assigned texts.

*WEEKLY QUESTIONS:*

To help focus the class in reading the texts, I will give a few questions each class which deal with the weekly reading assignment. These assignments not be graded as such, but their absence will have a negative effect on your grade. You should write a brief (50-70 word) response to *each* question. The response is not meant to be exhaustive, but only to indicate a few principles or points that would be involved in answering the question. Alternatively, you may be asked to formulate one or two questions of your own regarding a certain text. Your responses should be turned in each week on Moodle by the date of the class meeting for which they are assigned.

*GRADES:*

Students will be graded on class participation and completion of written assignments (30%) and:

## EITHER:

A 15-20 page term paper due on December 13 (70%). This option is recommended for DSPT MA Philosophy students. The paper may be use to fulfill the "Research Paper Review" requirement by submitting the proper form with the paper. **A title and brief description of the paper (200-300 words) will be due on Nov. 4.**

## OR

Three 4-5 page essays on assigned topics (70%). This option is recommended for students who may be new to philosophy or to the Aristotelian-Thomistic tradition. These will be due on November 4, November 25, and December 13. (With the permission of the professor, you may write on a topic other than the assigned one.)

Grades are based on the quality of student work, demonstrating both clearness of expression and mastery of essential concepts, and (for the research paper) evidence of research skills. Work is also evaluated in terms of the institutional goals of the school. For these, see page 1 of the DSPT Student Handbook [[http://www.dspt.edu/files/Student\\_Handbook.pdf](http://www.dspt.edu/files/Student_Handbook.pdf)].