

**ST. JOHN'S SEMINARY**  
**Archdiocese of Los Angeles**  
Camarillo, California  
Fall Semester 2019

COURSE TITLE: PHL 423: Philosophy of Nature  
INSTRUCTOR: Michael K. Grace  
EMAIL: [mgrace@stjohnsem.edu](mailto:mgrace@stjohnsem.edu)  
HOURS: Wed. 4:00-4:50 PM  
Thurs. 10:00-10:50 AM  
CREDITS: 2  
PREREQUISITES: None  
OFFICE HOURS: After class, and by appointment

**COURSE DESCRIPTION**

This course introduces the philosophical study of nature through the reading of original works of Aristotle and Aquinas and selected secondary readings that emphasize the relationship between the philosophy of nature and modern science.

**PRINCIPAL TEXTBOOKS**

Aquinas, Thomas. *The Principles of Nature.*

<https://dhspriority.org/thomas/english/DePrincNaturae.htm>

Aristotle. *The Physics.* Book I, Chapters 1-9; Book II, Chapters 1-9; Book III, Chapters 1-3.

Dodds, Michael J., O.P. *The Philosophy of Nature.*

<http://www.lulu.com/shop/michael-j-dodds/the-philosophy-of-nature/paperback/product-12200800.html> Accessed 9 June 2019.

Kuhn, Thomas. *The Structure of Scientific Revolutions.* Chicago: Univ. of Chicago Press, 2012.

**OTHER TEXTS**

Aquinas Thomas. *Book V, Commentary on Aristotle's Metaphysics.*

<http://dhspriority.org/Thomas/Metaphysics5.htm#9> Accessed 18 Sept. 2014.

Aristotle. *The Metaphysics.* Book 1, Chapters 1-8, and Book 5.

Augros, Robert M. "Nature Acts for an End." *The Thomist* 66 (2002): 535-75.

Dodds, Michael, O.P. "Top Down, Bottom Up or Inside Out? Retrieving Aristotelian Causality in Contemporary Science."

Elders, Leo. "Modern Science and the Philosophy of Nature."

Goyette, John. "Substantial Form and the Recovery of an Aristotelian Natural Science."  
*The Thomist* 66 (2002): 519-33.

Moreno, A. "The Law of Inertia and the Principle *Quidquid Movetur Ab Alio Movetur*."  
*The Thomist*: 38 (1974): 306-331.

Wallace, William A. "Nature as Animating: The Soul in the Human Sciences."  
*The Thomist* 49 (1985): 612-48.

## SUMMARY OF COURSE CONTENT

The classes will consist of question-and-answer discussions based on a close reading of the texts and supplemented by short lectures. Careful reading of the texts is essential for success in this course.

## LEARNING OUTCOMES

By the end of the course, students will understand and be able to apply the basic principles of Aristotelian philosophy of nature and apply them to contemporary questions regarding the foundations -- and limitations -- of modern natural science.

## GRADING POLICY

This course requires thoughtful reading of different kinds of texts – dialogues, treatises, disputations, and constitutions -- and is designed to encourage critical analysis and challenge unexamined political beliefs.

### Grading Standard:

**A:** Directly addresses the question or problem raised and argues coherently for a position while displaying familiarity with relevant information. Careful critical analysis and original thought are expected.

**B:** Highly competent performance that directly addresses the question or problem raised and solid analysis that does more than repeat class discussions. No major errors or omissions.

**C:** Acceptable performance that addresses the question or problem raised with clear but limited answers based on information offered in the lectures and class readings.

**D:** Inadequate performance that lacks completeness or coherence; the bare minimum.

**F:** Demonstrated lack of knowledge or understanding of the issues raised in the course.

Weighting of Grades:

Mid-term exam (3 take-home essay questions)	30%
Class attendance and participation	20%
Final exam (5 essay questions or an 8-10 page paper)	50%

ATTENDANCE

Attendance is essential. Students should read the assigned texts carefully and be prepared to answer questions about them in class and to listen with critical attention to each other.

SCHEDULE OF CLASS MEETINGS

August

- 28 INTRODUCTORY LECTURE
- 29 REVIEW OF ARISTOTLE'S *CATEGORIES*

September

- 4 PRINCIPLES, CAUSES AND ELEMENTS I: BEING IN POTENCY, BEING IN ACTION
- 5 PRINCIPLES, CAUSES AND ELEMENTS II: MATTER, FORM AND PRIVATION
- 11 THE FIRST PRINCIPLES OF CHANGE
- 12 PRIMARY MATTER
- 18 SUBSTANTIAL FORM
- 19 COMPOSITE UNITY
- 25 NATURE I
- 26 NATURE II

October

- 2 NATURE III
- 3 FIELD TRIP TO LABORATORY—TO BE SCHEDULED
- 9 CAUSALITY I: TYPES OF CAUSES
- 10 CAUSALITY II: RELATIONSHIPS AMONG CAUSES
- 16 NO CLASS – PILGRIMAGE TO OUR LADY OF GAUDALUPE.
- 17 NO CLASS—PILGRIMAGE TO OUR LADY OF GUADALUPE. **MIDTERM ESSAYS DUE.**
- 23 MOTION I--ARISTOTLE
- 24 MOTION II--ARISTOTLE
- 30 MOTION II-NEWTON
- 31 MOTION III--EINSTEIN

## November

- 6 INFINITY
- 7 THE CONTINUUM
- 13 PLACE AND TIME I
- 14 PLACE AND TIME II
- 20 TIME I
- 21 TIME II
- 27 CHANCE
- 28 THANKSGIVING—NO CLASS

## December

- 4 PHILOSOPHY OF NATURE AND THE NATURE OF SCIENCE
- 5 SCIENTIFIC REVOLUTIONS
- 11 REVIEW

FINAL EXAMINATION: OPTIONAL PAPER OR TAKE-HOME ESSAY QUESTIONS

## ACADEMIC INTEGRITY

Any student who commits an act of academic dishonesty will receive a failing grade for that assignment. In addition, academic dishonesty may result in the student receiving a failing grade in the course. All academic dishonesty will be reported to the Dean.

## STUDENTS WITH LEARNING OR OTHER DISABILITIES

Please advise the professor at the beginning of the semester for accommodations.