COURSE TITLE: PHL 423: Philosophy of Nature
INSTRUCTOR: Michael K. Grace
EMAIL: 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


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


OTHER TEXTS


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.