

Philosophy of Science

Philosophy 418/520

Spring 2015, MWF 11:30–12:25, BB-137

Professor: P.D. Magnus

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Office: HU-257

Campus phone: x2-4223

Office hours: M F 12:30–1:30 and by appointment

Texts: Course readings will be available on the Blackboard page for the course. I highly recommend printing them out. In general, people do not comprehend as well when they read on-screen as when they read on paper. So regardless of how much time you plan to spend looking at the readings, it will be time better spent if you have a hard copy.

Requirements

three take-home Exams @ 25%

one Paper @ 25%

Undergraduates (registered for 418) will be required to write 5–8 pages on an assigned topic.

Graduate students (registered for 520) will be required to write 10–12 pages on a topic of their choosing.

Participation: Participation in class discussion is strongly encouraged. Exemplary participation in class discussion will add to your grade, up to two-thirds of a letter grade.

Late policy: Assignments must either be ready to hand in at the beginning of class on the day they are due *or* put in the instructor's department mailbox before then. Anything after that point is considered late and will be penalized up to one letter grade per day.

Academic honesty: Students are encouraged to discuss issues from the course with each other and with others outside of class, but they are responsible for their own ideas. Cheating on exams will not be tolerated. Papers should include citations to any works cited or consulted, as well as acknowledgments of helpful interactions.

Absences: Students who will need to miss class for religious observance, away games, or for other scheduled reasons should discuss these issues with the professor at the beginning of the term. If an emergency results in absence, the student should contact the professor as soon as possible. Make-up exams will be given only for documented, excused absences.

Schedule

The schedule on the next page is approximate. The topics for a given day may change as the term progresses.

Week 1 jan 21, 23

• **Introduction**

Logical Positivism [read Schlick]

Week 2 jan 26, 28, 30

• **Scientific Realism**

Constructive Empiricism [read van Fraassen]

Underdetermination [read Stanford]

Week 3 feb 2, 4, 6

Realism [read Boyd]

Week 4 feb 9, 11, 13

Problems for realism [read Laudan]

Beyond realism [Read Magnus and Callendar]

Week 5 feb 16, 18, 20 • **Laws of Nature**

The new riddle of induction [Read Goodman]

The best systems account [Read Ramsey]

FIRST EXAM passed out feb 20, due feb 23

Week 6 feb 23, 25, 27

Best systems, continued [Read Woodward]

Laws as metaphysically basic [Read Maudlin]

Week 7 mar 2, 4, 6

The patchwork view [Read Cartwright]

Week 8 mar 9, 11, 13

• **Explanation**

Theories of explanation [Read Woodward]

— spring break —

Week 9 mar 23, 25, 27

Explanation and mechanisms [Read Bechtel and Abrahamson]

Week 10 mar 30, apr 1 • **The Unity of Science**

The classic view [Read Oppenheim and Putnam]

SECOND EXAM passed out apr 1, due apr 8

— no class apr 3 —

Week 11 apr 8, 10

Special sciences [Read Fodor]

— no class apr 6 —

Week 12 apr 13, 15, 17 Relations between sciences [Read Kitcher]

Week 13 20, 22, 24

Topic to be announced

Week 14 27, 29, may 1

Topic to be announced

Week 15 may 4, 6

Conclusion

PAPER DUE at final class meeting

THIRD EXAM passed out may 6, due by may 13 at 3:30