HU3700: Philosophy of Science
Course Information and Policies—Fall, 2001

Instructor: Ted Lockhart
Office: 326 Walker
Office Hours: 10:00–11:30 AM Monday, 2:00–3:30 PM Wednesday, and by appointment
Office Phone: 487-3245
Email: tlockha@mtu.edu
WWW: http://www.hu.mtu.edu/~tlockha

Course Description

In this course, we shall discuss several important questions about the nature and methodology of science. They include the following:

- What are the distinguishing characteristics of science? How is science different from other areas of knowledge, such as history or literature? What separates science from pseudoscience—e.g., astrology?
- Is there a scientific method? If so, is there one basic method for all sciences? Or are there different methods for different sciences—physics, biology, sociology, etc.?
- What are the virtues of scientific knowledge? E.g., is science a better way of knowing about the universe than its competitors, such as religion? Is science more rational than its competitors?
- How should scientists choose among competing scientific theories? Are there rules governing those choices? If so, what are they?
- Is there progress in science? Is science getting us closer and closer to a true description of the world and a true explanation of how it operates?

We shall focus on the writings of two important 20th century philosophers of science, Carl Hempel and Thomas Kuhn. We shall also pay special attention to the evolution-creation controversy.

Required Texts


Exams: We shall have 3 in-class exams during the semester. There will also be an optional final examination during final exam week at the end of the term.

Quizzes

Quizzes may occasionally be given. The number of quizzes and the dates on which they are given will be up to the instructor. Quizzes will not be announced in advance. They will be used to determine how well you are preparing for class (e.g., by reading the assigned material before class time) and how well you are following the class discussions. Your grades on the quizzes will be considered part of your class participation grade. (See below.)

Course Paper

Each student will write and submit a formal, typed course paper. A list of topics for the paper will be provided. In your paper, you will state and support your views on some problem or question in the philosophy of science. Your grade on the paper will depend mainly on how well you support your views on that problem or question. After you have submitted your written paper, you may be interviewed (by the course instructor) and asked to further explain and defend your ideas and arguments. The results of the interview will partially determine your grade on the paper.

You may submit a draft of your course paper to the instructor for comments and suggestions for revision prior to turning in your final paper for grading. Information about the paper’s format
Your final course grade will depend on (1) your grades on the 3 in-class exams, (2) your grade on the course paper, (3) your class participation grade, and (4) your grade on the final exam (if you choose to take the final exam). If you take the final exam, your grade on it will determine 50% of your final course grade, and the other elements, (1), (2), and (3), will determine the other 50%. If you do not take the final exam, then your final grade will depend entirely on (1), (2), and (3). Of the portion of your grade that is determined by (1), (2), and (3), the percentages are as follows:

- 60%: 3 in-class exams
- 20%: course paper
- 20%: class participation

Your class participation grade will depend on the quality and frequency of your participation in class discussion. You are expected to be present from the beginning of each class and to stay until class is dismissed. If you must leave class before the end of the period, you should inform the instructor before class begins. Whenever, you have to miss class, it is your responsibility to find out what was discussed in class and what announcements were made.

Final course averages will be interpreted according to the following scale:

- A: 93–100
- AB: 88–93
- B: 83–88
- BC: 78–83
- C: 73–78
- CD: 68–73
- D: 60–68
- F: 0–60

Neither grades nor averages will be curved.

Record-keeping

You should keep copies of all written work—returned exams and quizzes, course paper drafts, etc.—until your final course grade has been turned in at the end of the semester. This will enable us to resolve any questions that may arise about the recording and calculating of grades.

Academic Dishonesty (University Policy)

According to University policy, "Academic Dishonesty is prohibited and includes the following violations:

- Plagiarism—copying another's work or ideas and calling them one's own or not giving proper credit or citation.
- Cheating—intentional use of any unauthorized study aids, equipment, or another's work during an academic exercise.
- Fabrication—intentional falsification or invention of any information or citation during an academic exercise without proper authorization.
- Facilitating academic dishonesty—allowing or helping another individual to plagiarize, cheat, or fabricate information.

Penalty: not less than academic integrity warning, not more than expulsion"

(http://www.admin.mtu.edu/ dos/rights/regulations.html)

This policy (stated above) will be followed in this course. At a minimum, graded work that involves plagiarism, cheating, or fabrication (as defined above) will receive a grade of zero, and no opportunity will be afforded to make up the work. Software to detect instances of plagiarism may be used.

Disabilities

Reasonable accommodations will be made for students with certain medical and psychological disabilities. You must notify the course instructor at the beginning of the semester if you wish to request such accommodations.
Final Course Grade

Your final course grade will depend on (1) your grades on the 3 in-class exams, (2) your grade on the course paper, (3) your class participation grade, and (4) your grade on the final exam (if you choose to take the final exam). If you take the final exam, your grade on it will determine 50% of your final course grade, and the other elements, (1), (2), and (3), will determine the other 50%. If you do not take the final exam, then your final grade will depend entirely on (1), (2), and (3). Of the portion of your grade that is determined by (1), (2), and (3), the percentages are as follows:

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