

NORTHWESTERN UNIVERSITY
Department of Economics

Economics 328—Complexity Economics

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Important: It is my assumption, as well as that of Northwestern University, that you will attend every class. You are responsible for any changes or additions to what follows that may be announced. Some material will be posted on Canvas; some material may be passed out in class. Should you miss a class for any reason, it is your responsibility to get the material from someone else in the class. The following plan is tentative. Changes may be made as necessary.

Purpose: Economists have found it useful to relax the traditional assumptions of an economy in equilibrium populated by agents who are perfectly rational. We'll consider alternative approaches that assume that markets may not be in equilibrium and that the people in the economy may not perfectly understand their environment. They face fundamental uncertainty in their decision-making. We'll consider adaptive behavior and the effects in the economy.

PREREQUISITES: Economics 310-1 and 310-2

Texts: There is no formal text for the class. Various relevant readings will be made available throughout the quarter.

Office Hours: Times and locations in a separate doc in the Files section.

Section: Attendance at the weekly section is expected. The sections will be used to present details of class material and to expand on ideas presented in lecture or in the text, and to address questions that you may have.

Method of Evaluation: Each exam and the paper account for a third of the total possible points.

Examination Policies and Dates:

Exam 1—Monday, February 6
Exam 2—Tuesday, March 14, 3-5 PM

Excuses for absences from the exams will be accepted only in real cases of illness (with verification from the student health center by signing a consent form or a doctor's excuse) or emergency. If an absence from a midterm is unexcused, the student is subject to receiving a grade of zero for that exam. Students that miss the first midterm with an excused absence will take a cumulative final exam at the time of the second midterm. Every Northwestern economics class is required to use a given letter grade distribution. Requests for special treatment in effect ask to be moved up at the expense of another student. You will lose 5 points for each time that you ask if you can take an exam at a time other than scheduled or for special treatment with respect to grades.

The class re-grade policy will be posted on Canvas later in the quarter. Happily, it's rare that a Northwestern student chooses to cheat but I am required to report any evidence of cheating to the Dean's office immediately with no discussion with the student. No cheating is allowed in any way in this class.

Northwestern University owns a copyright on all class material, including the lectures. No recording of classes is allowed nor is posting of class material (e.g., homework sets) online allowed.

Due to comments from students regarding the negative externalities involved, the following policies hold: No reading of newspapers or chatting during class. Cell phones are to be put away (in your pocket, purse, or bookbag) and have their ringers turned off for the entire class. If you are unable to resist the impulse to check messages and text, you are welcome to very quietly leave the room to do so. No laptop/notebook computers allowed. Violation of this policy is subject to a grade penalty with no warning.

Course Topics: The plan for the course includes the following topics:

Introduction and Basic Ideas

Evolutionary Economics

Bounded Rationality—Evolutionary or Ecological Rationality

Fundamental Uncertainty in the Economy (and Our Lives!)

Evolutionary and Complexity Economists on Innovation

Creative Destruction

Complexity Economics Ideas, Tools, and Results. For example,

Management Strategy

Agent-based Models (ABM)

Evolutionary Game Theory

Role of Networks

Financial Markets

Macroeconomics