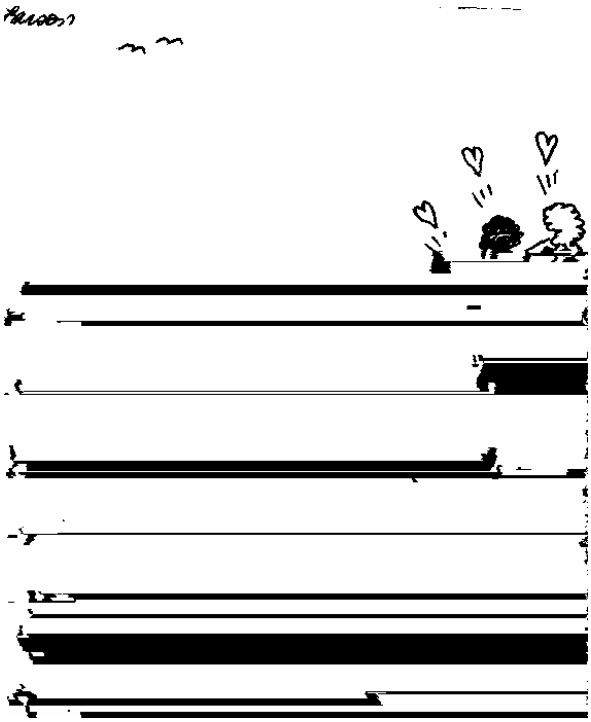
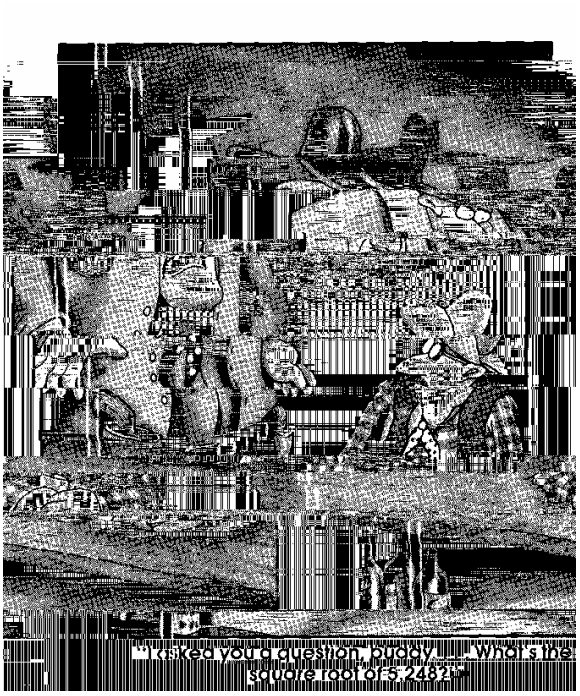
Introduction to Mathematical Economics 4808

Course Syllabus - Spring 2007





Econ 4808 Introduction to Mathematical Economics

Edward Morey

Spring 2007 (January 11, 2007)

The intent of this course is to teach you the language of mathematics and how to use it to better understand economics. The ability to describe an economic model verbally, graphically, and mathematically will make your life as an econ major a lot easier.

The course considers the mathematics of, and economic applications of equilibrium, slopes and

Class format: Lecture/problem solving/discussion

Economic theory, critical thinking and problem solving will be stressed. Class format will include both individual and group problem solving. After completing the course, you will be better able to critically evaluate economic theories.

You will spend a considerable amount of class time interactively formulating and solving problems and building models. Small groups will often be utilized.

Office Hours: My office hours are Tuesdays and Thursdays 2:00-2:45 and Thursdays 11:00 to 11:30, and by appointment. Feel free to email me but not that might take a day or more for me to respond. My office is Econ 122. To make an appointment, catch me after class or contact me by email (Edward.Morey@Colorado.edu) - suggest some times.

Correct Class Behavior:

Readings:

I will likely not assign specific readings from any book.

But, that said, you need access to a good text or texts on algebra and calculus.

Essential Mathematics for Economic Analysis (Knut Sydsaeter and Peter Hammond)

is the official math text for undergraduate econ majors here at C.U. You are expected to own a copy and understand much of the material in this book (this is true for all of your economics courses, not just 4808)

Essential Mathematics for Economic Analysis is the required text for Econ 1078 and Econ 1088 and students in those courses are told to keep and use the book until they finish their undergraduate major in economics. If you don't have a copy you should be able to easily find one online. ISBN 0 273 68180 X

> A note about *Essential Mathematics for Economic Analysis*. This book is designed to teach you the mathematical tools that you will need to solve economic problems. In addition it applies these tools to solve basic economic problems. The authors' intent was **not** to teach economic theory.

To do well in this course, you will need to **understand and use mathematical tools.** In this sense, an understanding of some mathematics is *necessary* for you to do well in the course. However, *it is not sufficient*. You will also need to understand and use economic theory, and, most importantly, you will need to be able to integrate the economic theory and the math to solve economic problems. (Being a math wiz will not guarantee you a good grade) You can only achieve this integration of mathematics and economics by solving economic problems. You will have ample opportunity to do this both in and out of class. In this sense, understanding of the material in the text is *necessary but not sufficient* for one to do well in the course.

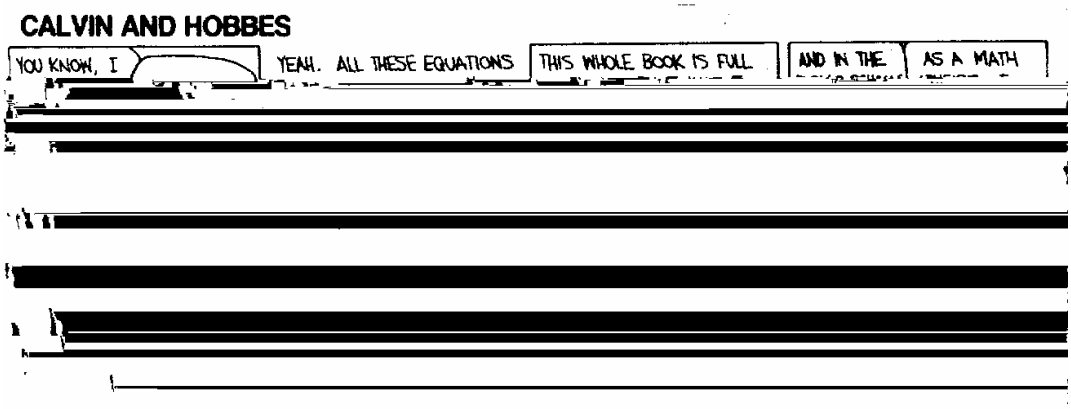
You should also have an intermediate micro theory text handy; e.g. the one you used in Econ 3070.

> I like *Intermediate Microeconomics* (Hal Varian). An intermediate micro book that is both elegant and rigorous. It will provide you with the theory that you need.

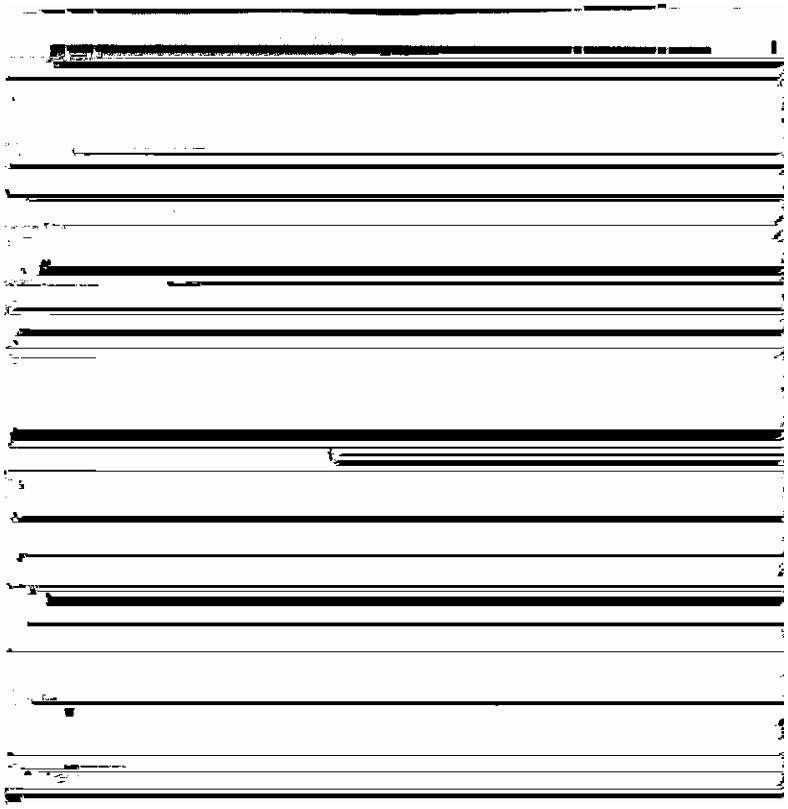
An Aside: There is lots of software out there that can do algebra and calculus. One good example is called *Mathematica.* It can differentiate, integrate, solve systems of equations and create great graphics. *Mathematica* is available on the C.U. computer system. One can also buy a student version of it at the bookstore. It is cool stuff. While *Mathematica* will play no formal

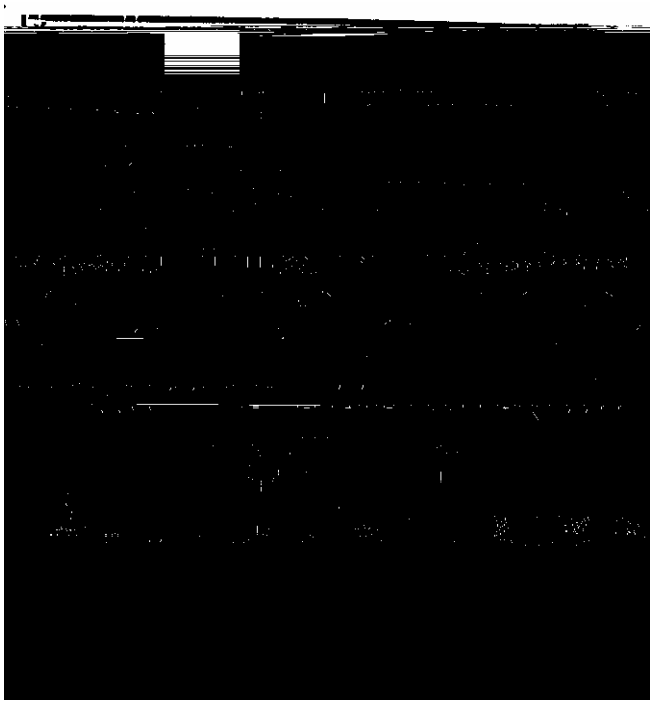
role in the course, it could help you to learn and solve problems. Of course, **you** would never use it a substitute for learning how to take a derivative. (Even if you have it on your computer, you won't have it available for in-class exams.) We will limit the use of handheld devices during quizzes and exams. If you would like to learn more about *Mathematica*, please visit the web site for my Econ 7818 course. I personally use the mathematical software, *Mudpad*; it is integrated

Mathematics and Religion:

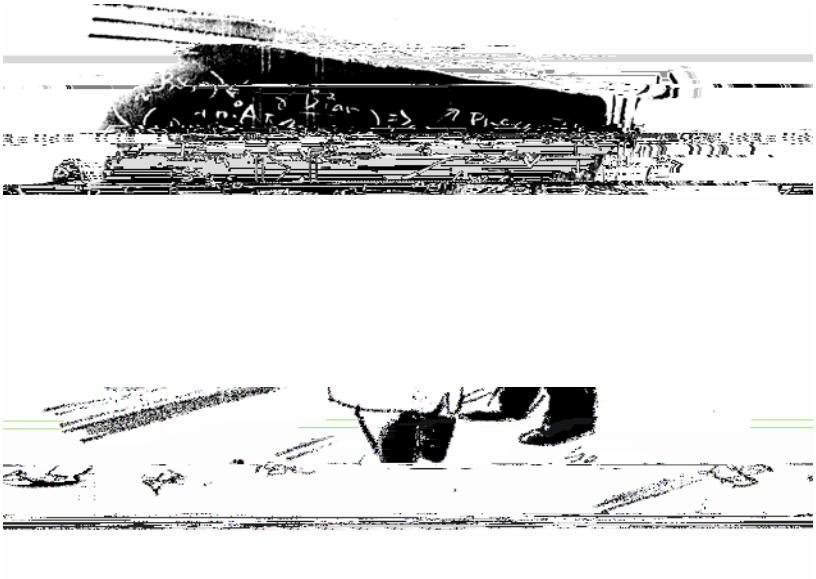


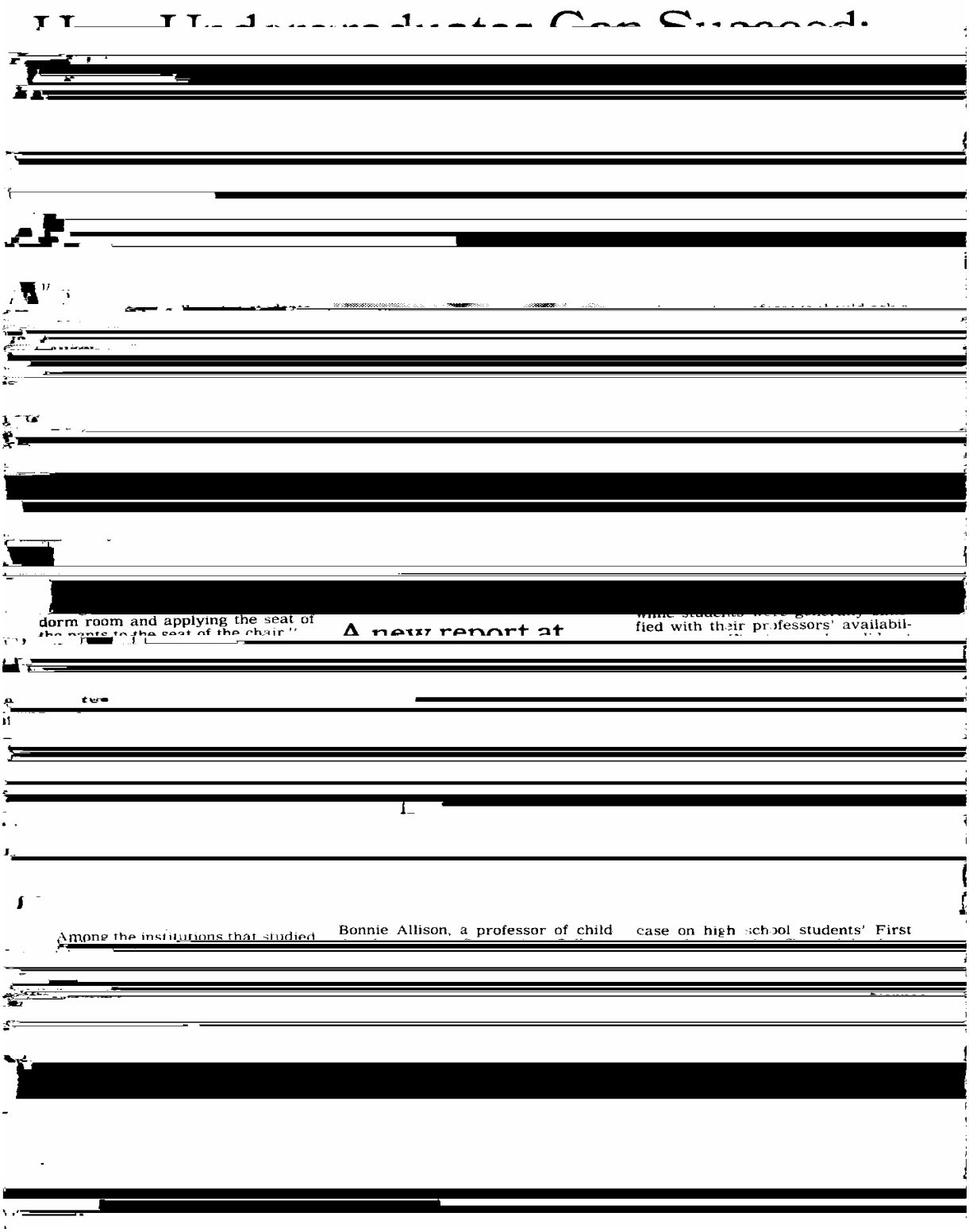
Potential Dangers from Course





I. What to look for in "proofs"





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A new report at

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Among the institutions that studied

Bonnie Allison, a professor of child

case on high school students' First