A Course Load for the Game of Life
By N. GREGORY MANKIW

AS a Harvard professor who teaches introductory economics, I have the delightful assignment of greeting about 700 first-year students every fall. And this year, I am sending the first of my own children off to college. Which raises these questions: What should they be learning? And what kind of foundation is needed to understand and be prepared for the modern economy?

Here is my advice for students of all ages:

**LEARN SOME ECONOMICS** You knew this was coming. Perhaps I am just trying to protect my profession’s market share, but I hope it is more than that.

The great economist Alfred Marshall called economics “the study of mankind in the ordinary business of life.” When students leave school, “the ordinary business of life” will be their most pressing concern. If the current moribund economy turns into a lost decade, as some economists fear it might, it will be crucial to be prepared for it.

There may be no better place than a course in introductory economics. It helps students understand the whirlwind of forces swirling around them. It develops rigorous analytic skills that are useful in a wide range of jobs. And it makes students better citizens, ready to evaluate the claims of competing politicians.

For those who have left college behind, it is not too late to learn. Pick up an economics textbook (mine would be a fine choice), and you might find yourself learning more than you imagined.
Not convinced? Even if you are a skeptic of my field, as many are, there is another, more cynical reason to study it. As the economist Joan Robinson once noted, one purpose of studying economics is to avoid being fooled by economists.

**LEARN SOME STATISTICS** High school mathematics curriculums spend too much time on traditional topics like Euclidean geometry and trigonometry. For a typical person, these are useful intellectual exercises but have little applicability to daily life. Students would be better served by learning more about probability and statistics.

One thing the modern computer age has given everyone is data. Lots and lots of data. There is a large leap, however, between having data and learning from it. Students need to know the potential of number-crunching, as well as its limitations. All college students are well advised to take one or more courses in statistics, at least until high schools update what they teach.

**LEARN SOME FINANCE** With the rise of 401(k) plans and the looming problems with Social Security, Americans are increasingly in charge of their own financial future. But are they up to the task?

Few high school students graduate with the tools needed to make smart choices. Indeed, many enter college without knowing, for instance, what stocks and bonds are, what risks and returns these assets offer, and how best to manage those risks.

The evidence of financial naiveté shows up every time some company goes belly up. Whether it is Enron or Lehman Brothers, many company employees are often caught with a large fraction of their wealth in a single stock. They fail to heed the most basic lesson of finance — that diversification provides a free lunch. It reduces risk without lowering expected return.

College is an investment with a great return. The gap between the wages of college graduates and those with only high school diplomas is now large by historical standards. If those college grads are going to manage their
earnings intelligently, they need to study the fundamentals of financial decision making.

**LEARN SOME PSYCHOLOGY** Economists like me often pretend that people are rational. That is, with mathematical precision, people are assumed to do the best they can to achieve their goals.

For many purposes, this approach is useful. But it is only one way to view human behavior. A bit of psychology is a useful antidote to an excess of classical economics. It reveals flaws in human rationality, including your own.

This is one lesson I failed to heed when I was in college. I never took a single psychology course as an undergrad. But after the birth of behavioral economics, which infuses psychology into economics, I remedied that mistake. Several years ago, as a Harvard faculty member, I audited an introductory psychology course taught by Steven Pinker. I don’t know if it made me a better economist. But it has surely made me a more humble one, and, I suspect, a better human being as well.

**IGNORE ADVICE AS YOU SEE FIT** Adults of all stripes have advice for the college-bound. Those leaving home and starting their freshman year should listen to it, consider it, reflect on it but ultimately follow their own instincts and passions.

The one certain thing about the future is that it is far from certain. I don’t know what emerging industries will be attracting college graduates four years from now, and neither does anyone else. The next generation will shape its own economy, as the young Bill Gates and Mark Zuckerberg shaped ours. Those now packing up their clothes, buying textbooks and meeting roommates hold the future in their hands. Every year, when I look out over my 700 eager freshmen on that first day of class, the view gives me optimism about the path ahead.
Greg Mankiw on what kind of foundation is needed to understand and be prepared for the modern economy - an interesting read as the new school year starts. Subscribe to email updates from the tutor2u Economics. Join 1000s of fellow Economics teachers and students all getting the tutor2u Economics team's latest resources and support delivered fresh in their inbox every morning. Subscribe. Thanks.

Of course, just because it's trite doesn't make it any less true, and despite the best efforts of homogenizing American popular and consumer culture, not everyone thinks or speaks like us or has the same customs or same religion or system of laws or healing or politics. I know; it's strange. One might learn about other people in an anthropology class, say, but there are certainly other options. If anthropology is the chosen route, I would recommend that one choose carefully, making certain that the readings for any candidate anthropology class be made up of ethnographies and not books on conti The Game of Life (an example of a cellular automaton) is played on an infinite two-dimensional rectangular grid of cells. Each cell can be either alive or dead. The status of each cell changes each turn of the game (also called a generation) depending on the statuses of that cell's 8 neighbors. Neighbors of a cell are cells that touch that cell, either horizontal, vertical, or diagonal from that cell. The initial pattern is the first generation. The second generation evolves from applying the rules simultaneously to every cell on the game board, i.e. births and deaths happen simultaneously. Af When students leave school, the ordinary business of life will be their most pressing concern. If the current moribund economy turns into a lost decade, as some economists fear it might, it will be crucial to be prepared for it. There may be no better place than a course in introductory economics. It helps students understand the whirlwind of forces swirling around them. It develops rigorous analytic skills that are useful in a wide range of jobs.