Life After College

College is a great first step toward an exciting and fulfilling career and life, but there a bunch of stuff that they don’t teach you in college...

The Real World

- Graduate School

- Career in Industry

- $$$$ 

Who is this guy?

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Graduate School

Much more intense than undergrad

- Most graduate programs start out like undergrad: courses, lectures, projects, homework (2 years)

- Get used to reading dry and obtuse journal papers

- After surviving two years, most schools give you a Masters Degree

If you pursue a Ph.D., you will:

- Most likely be required to take qualifying exams along with your course work

- Have to find a professor to serve as your research advisor

- Get used to writing dry and obtuse journal papers

- Come up with a new and different thesis topic, do a ton of research and writing, and get a neato robe!

Paying for graduate school

Most people have some sort of assistantship (indentured servitude) to help them pay for graduate school

Research Assistantship

- Work for a professor in his/her lab

- Read papers, develop code, might get a decent machine

- Hard work, but you learn a lot and get hands on experience

Teaching Assistantship

- Work for the department

- Grade homeworks, teach recitation sections, hold office hours

- Hard work, but you might there might be a cute freshman or two
Why should you go graduate school?

So, why go in the first place?

- Genuine intellectual curiosity, a love for what you do, and a desire to do more of it
- Ability and stamina to survive
- Want a different perspective on college than your undergrad institution
- Want to teach or perform research full-time

Notice what’s not in the list:

- Want to make lots of money
- Want to get fame and prestige
- Don’t know what to do with your life

Grad School can be fun!

It isn’t all bad:

- You will learn a ton of stuff
- Get to meet and work with “interesting” people
- Might get to travel and go to conferences
- You’re still around a lot of young people
- You get more letters after your name

Preparing for graduate school?

Get really good grades as an undergrad

- You’ll have to take the GREs

Have a good idea of what you want out of graduate school

- Check out the web sites of a number of departments
- Choose which schools to apply to
- Visiting campuses and meeting with faculty and students is invaluable

Get ready for long hours, emotional roller coaster

- Time and life management is important
- Make friends and get out of the lab!

What are the best graduate schools?

According to U.S. News & World Report*:

1. Carnegie Mellon University
2. Massachusetts Institute of Technology
3. Stanford University
4. University of California, Berkeley
5. University of Illinois, Urbana-Champaign
6. Cornell University
7. University of Texas, Austin
8. University of Washington
9. Princeton University
10. California Institute of Technology
11. University of Wisconsin, Madison
12. Georgia Institute of Technology
13. University of Maryland, College Park
14. Brown University
15. University of California, Los Angeles
16. University of Michigan
17. Rice University
18. University of North Carolina, Chapel Hill
19. University of Pennsylvania
20. Columbia University
21. Duke University
22. Harvard University
23. Purdue University
24. University of California, San Diego
25. University of Chicago
26. University of Texas, Austin
27. University of California, Berkeley
28. University of Michigan
29. Stanford University
30. Harvard University
31. Massachusetts Institute of Technology
32. University of California, Los Angeles
33. University of Michigan
34. University of Pennsylvania
35. University of California, Berkeley
36. University of Texas, Austin
37. University of California, Los Angeles
38. University of Michigan
39. Stanford University
40. Harvard University
41. Massachusetts Institute of Technology
42. University of California, Los Angeles
43. University of Michigan
44. Stanford University
45. Harvard University
46. Massachusetts Institute of Technology
47. University of California, Los Angeles
48. University of Michigan
49. Stanford University
50. Harvard University
51. Massachusetts Institute of Technology
52. University of California, Los Angeles
53. University of Michigan
54. Stanford University
55. Harvard University
56. Massachusetts Institute of Technology
57. University of California, Los Angeles
58. University of Michigan
59. Stanford University
60. Oregon Graduate Institute
61. University of Oregon
62. Oregon State University

*http://www.usnews.com
Other Graduate School Options

Graduate School doesn’t have to be for CS

- A Bachelor’s Degree in CS means that you’ve worked hard and that you capable of learning
- Law schools and business schools realize this
- Other fields of math and engineering require skills similar to CS

Industry

Why get a job in Industry?

- Want to build something that takes longer than a semester and may actually be used by people
- Want to be able to get sleep at nights and have the weekends off*
- Make a decent wage and improve your standard of living

*Not all companies are like this. See http://www.microsoft.com

How do I find a job?

Know somebody:

- Professors may have former students or other industry contacts they can hook you up with
- Friends or family friends may know of job openings
- Recruiters might be helpful, but since many new college hires are in the same boat...

Get an internship:

- Demonstrates that you already have some industrial experience
- Good for references
- Gives you a good idea of what industry is like

Hit the want ads:

- Have to start some place

On-the-job survival skills

Advice for less-experienced employees:

- Get to know your co-workers
- Make your presence be known in a good way
- Ask questions, but only ask them once
  - Write down the answers, keep an engineering journal
- Be patient with older (ahem, more senior) co-workers
  - Sometimes the old school is better
- Keep learning while you’re on the job
  - New tools, new procedures, the way things are done
Money and Finances

In 2003, the average starting salary for computer science majors was $47,109*. With a Masters Degree the number goes up to $64,200.

One of the things they don’t teach you in college is how to deal with all of this money that’s coming to you.

- Lot’s of people have problems managing their money
- Personal debt (especially credit card debt) has skyrocketed and personal saving have plummeted
- Let’s face it, money makes the world go round, so it’s really important that you have a good handle on your finances

*http://www.bls.gov/oco/ocos267.htm

Some things to think about

Go find a financial advisor. Many banks and credit unions have people who can help you.

Do you have a lot of debt?

- Credit card bills are insidious, rates are high and will only get higher. Pay them off as soon as you can.
- Car payments are a pain, but interest rates usually aren’t that bad
- Most college loans are tax deductible, so paying them off early may not make much sense

After you’ve gotten your debt under control, you can start saving.

Saving for the short term

We all have short-term financial goals:

- Get a new car, take a vacation
- Put a down payment on a house
- Get married, start a family, etc.

In order to meet these goals, it helps to budget:

- How much do you spend on food, clothing, entertainment, gadgetry, housing, travel, etc. each month?
- How much do you have left over? How much do you need?
- Putting away a little each month is the easiest way to go
  - If you have money automatically withdrawn, then it never has a chance to burn a hole in your pocket
  - “Dollar cost averaging” helps iron out the bumps of a volatile stock market

Saving for the long term

It may seem like a long ways away (and it is), but some day you’ll want to retire.

Social Security provides a cushion for retirees today, but after 76 million Baby Boomers, there won’t be much left for us.

Instead, the government gives us tax incentives to save on our own:

- 401(k) plans are sponsored through your employer and let you save up to $13000 in 2004 tax-deferred
- A “traditional” IRA (Individual Retirement Account) lets you save up to $3000 in 2004 tax-deferred
- A Roth IRA lets you save up to $3000 in 2004 after tax, but the earnings grow tax free

Compounded interest is an exponential curve – it pays off in the long run!
Summary

The fun is only beginning...

- At some point, you will graduate
- There a lot of options and lots of choices to make
- Graduate school can augment your undergraduate education
- A job in industry can be rewarding and lucrative
- Financial issues are important, so use your money wisely