1 ☐ **On Being a Scientist**

2 ☐ **Computer Science vs. Other Science**

Does this book apply to computer scientists?

What parts (if any) do not apply?

What are the most/least useful aspects for CS?

What did we learn that is of value?

What is missing?

3 ☐ **"The Scientific Community"**

How is science different from other enterprises?

What is the role of the scientist in making the process work?

What aspects of that role are common to all scientists, and what is discipline-specific?

What does it mean to be "doing good science" or to "be a good scientist"?

Who judges?

On what basis?

Why does it matter what anyone thinks?

4 ☐ **Rewards and Credit**

What are the "rewards" in science?

Is credit important?

Who decides resources are allocated?

How? On what basis?

5 ☐ **Publication and Citation**

Why is publication important?

When is the right time to publish a piece of work?

- Why wait? What is "too early"?
- Why publish early? What is "too late"?

What should we publish?

- Should we release our tools? (simulators, traces, etc.)
- Should we release the software that embodies our claims?

Should we reveal our results before publication?

- Locally? Externally? To friends? Private but not public?

What is the purpose of citation?

6 ☐ **Authorship**

Should your advisor always be a co-author on your papers?

Should your advisor publish papers embodying your work, but without listing you as a co-author?

What should the order of authors be? Why does it matter?

How much work should you do on a paper before you are listed as a co-author? Why does it matter?

For big projects, should we publish as teams or individuals?

As a student, what are the tradeoffs for being involved in a big project?

7 ☐ **Claims and Consensus**

How does CS differ in the nature of our science?

- Do we formulate and test hypotheses?
- Do we make claims that are subject to empirical validation?
- How can/do others judge the validity of our results? How is consensus of truth reached? How is it revised?
- How do methodologies become accepted?
- Are our instruments fallible in the same way as (say) astronomy? Or polywater?
- Is everything we care about perfectly measurable?
- Do our hypotheses/claims/results depend on human behavior?

8 ☐ **Conflicts of Interest**

What kinds of conflicts of interest occur in computer science?

How do recognize them?

- Institutionally
- Individually

How should we deal with them?
- Institutionally
- Individually

What kinds of conflicts of interest do not occur in our field?

9 ▢ Plagiarism and Misconduct

Case studies

How should it be handled?
- Institutionally
  http://www.ors.duke.edu/policies/miscond.htm
- Individually
- What should you do if you see it? In a colleague? A student? Your advisor?
- Who is responsible for preventing it?

10 ▢ Service and Social Responsibility

What are the social responsibilities of scientists?
- Education?
- Social policy?
- Technology transfer to business?
- Technology transfer to the military?

How do these questions apply to computer scientists?
  http://www.cpsr.org/

How should social responsibilities and service be factored into evaluation of scientists? Should it be?

11 ▢ Socializing New Scientists

Is this stuff important to teach?
How should we teach it?