

As discussed on the opening handout, a short paper is part of the work for the course. It will be due in class on the last day our class meets, **May 1, 2009**; it represents 20% of the course grade. The motivation behind the short paper assignment is for you to explore some particular aspect of the course in a bit more depth, drawing both on your own academic interests and background knowledge, and of course on reading/research that you do in preparing the paper. With this in mind, the range of possible paper topics and formats is quite broad, representing the diversity of student interests in the class.

To help in thinking about the paper, here are some general and specific guidelines.

- First, the mechanics: the paper should be 4-6 pages long (with any standard font size, margins, and line spacing). It should include citations to relevant articles, papers, books, or Web sites. This is actually relatively little space in which to explore a topic, so part of the challenge is to make effective use of the limited length.
- The main goal is that the paper should involve some creative exploration of a topic related to the course. While the paper should contain citations, it should not just be a literature review that summarizes the contents of other prior work; the paper should contain some novel discussion or analysis of the topic.
- “Novel discussion or analysis” can mean any of a number of things: it can be mainly qualitative or mainly quantitative, depending on your interests and background; it could be an analysis that shows how our understanding of some real-world problem benefits from the ideas introduced in the course; it could be a discussion that relates ideas from the course in a non-obvious way to things you are learning in other classes; it could involve a critique and generalization of one of the mathematical models we’ve studied, potentially with some mathematical analysis or a discussion of the applicability of the model; it could, if it fits with your interests, involve collecting data to analyze or running a computer simulation.
- You should think about your own blog posts for the course; it’s quite possible that one of these contains the beginnings of a good paper topic. With this in mind, we will allow you to re-use text that you’ve written for a blog post as part of your paper, provided you think that the topic of the post is substantial enough to expand into an interesting 4-6-page paper. The full blog is public, and so with proper citations you can draw on ideas arising in other blog posts in formulating your own paper. However, since it’s important for the paper to involve new ideas, we would discourage you from using ideas drawn from elsewhere on the blog unless they are being substantially expanded and modified for their role in your paper. Of course, with anything you draw on from other blog posts, you must cite the relevant posts in your paper.

We should stress that the course policies on plagiarism still apply to the misuse of text written by others, and we will continue to take this issue very seriously.

- Finally, as always, feel free to use office hours if you are trying to decide among possible paper topics and want to talk about the options you’re considering.