CS80—Senior Seminar
Syllabus
Fall 2000

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Contact: Scheduled office hours: T/Th 10:00–11:00 and 2:30–4:00, F 1:00–3:00. Also other times by appointment.

Structure: We will follow the same structure as last year. (I quote from the 1999 syllabus.)

Here is a copy of the framework which was approved by the CS department for the senior seminar:

- Senior seminar will be a small group or individual research, design, and implementation project chosen by each student or self-selected group of students. Students should be encouraged to work individually rather than in a group.
- Projects would be approved by the faculty member leading the senior seminar. The expectation is that this would be a significant project acting as a "capstone" for their CS education. Depending on the student's (or sub-group's) interest there may be more of a research and writing aspect to the work or possibly more design and implementation of software.
- The projects would be structured with various deliverables during the semester culminating with a colloquium at the end of the semester. This would be agreed upon in advance by each student (or sub-group) and the professor.
- The professor will arrange for each of the students taking the senior seminar to give informal presentations (3 minimum) during the semester to the senior seminar group and any other interested faculty and students.

(end quote)

Reading: In addition, we will be reading and discussing parts of two books:

- Hodges, *Alan Turing: The Enigma.*
- Penrose, *The Emperor's New Mind.*

I will also have some additional papers as handouts &/or reserve reading (mostly primary sources, for those who are interested). While these two books could be seen as a debate about the prospects for AI, my own interest has more to do with what they have to say about the relationship between the notion of computability and human experience. Of course, I don't expect we will limit ourselves to my own interests.

The Hodges book is not yet available (a new edition is being released in September) and, of course, it is the one I want to start with. I will supply copies of the relevant sections until it comes in. The author maintains a very rich web on Turing under `http://www.turing.org.uk/turing/`.

Class meetings will take the form of a research group meeting—each week each of you will bring us all up to date on your projects, you will make periodic presentations, and we will discuss the reading. All phases of this will be factored into your grade—it is essential that you make it to the class meetings.

Schedule: We'll follow the same schedule as last year (quoting again):

What to turn-in when (deliverables):

- End of September
  - Outline of your research paper
  - Outline of your design & development or implementation plan
- End of October
  - Draft of your research paper
  - Draft of your design & development or implementation plan
  - Initial release of software or environment
- End of November
  - Completed research paper
  - Completed design & development or implementation plan
  - Completed software or environment
- December
  - Colloquium (final, formal, presentation)

(end quote)

Evaluation: (Mostly quoting, yet again) The highest grade possible is an A, the lowest an F. Printed copies of the documents will be due in class on the days listed above unless we agree to change a particular item as a group. Each day a particular item is late will cost about 1/2 a grade.

Through-out the project your logs should be available and up-to-date. I'll add links to them on the class page when they are available. A text file in a location that's visible to a web server is as complex as the log needs to be. The important issue is using it as a tool to guide your work. You should consider your log to be a continuous deliverable.
(end quote)

Each of the deliverables listed above as well as the log and participation in the discussions (even though I still don't know how to quantify this) will be assigned a grade. The completed paper, plan, project and presentation will get twice the weight of the others, otherwise everything will be weighted equally.

Disabilities: I will be happy to work to accommodate any student with disabilities. The Earlham policy is:

> Any student with a documented disability (e.g., physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact Academic Support Services and the instructor at the beginning of each semester. *Accommodation arrangements must be made during the first-two weeks of the semester.*

It is important to follow this procedure.