CS-480—Senior Seminar
Syllabus
Spring '04

James Rogers
x1671
jrogers@cs.earlham.edu
www.cs.earlham.edu/~jrogers

Contact: Scheduled office hours (tentative): Thursday and Friday 10:00–11:00, Tuesday and Friday 2:30–4:30.

Also other times by appointment. I strongly encourage you to send questions/requests for clarifications to me via e-mail. Unless you specifically request otherwise (or it seems inappropriate) I will strip identifying information off and send my response to the class list. Since most of your fellow students will have the same questions, you will be doing all of us a favor by making the effort to submit them—very much appreciated.

Text: We will be working with selected articles from the current and past literature.

Structure: The senior seminar has two components. The first is a capstone study—a large-scale development or research project that serves as a culmination of your CS studies. This will usually include development of a substantial software system and will invariably include a written paper as well as an oral presentation covering the paper (and the system) at a colloquium at the end of the semester. You will also submit a formal proposal for your project along with a detailed plan for carrying it out and a shorter survey of the the area in which you plan to work. The survey will include an initial bibliography for your final paper, which is due two weeks before the survey itself. These will be presented to the class as a whole, the survey about a third of the way into the semester and the proposal about two-thirds of the way in. In addition, you are expected to maintain a web page on your project which will be linked into the class web. This should include a log of your progress and which should be updated at least weekly.

The second component is group reading and discussion on a topic within the broad area of computer science. This semester the readings will be drawn from the

literature. I have chosen the papers for the first discussion. The remaining papers will be selected by the class members, with my help and approval. Each of you will be responsible for preparing one set of papers, working together in pairs. You will select two or three related papers from either the current journal literature or from our library's serials collections, discuss it with me and obtain my approval, prepare a set of study questions for the class, again with my approval, and lead the discussion. Finally, you will prepare a brief synopsis of the paper and our discussion which will also become a part of the class web. The papers and study questions will be distributed to the class the week before the discussion. There is a specific schedule for carrying out these tasks, which you are required to follow. This is detailed on an accompanying sheet.

While the class is scheduled to meet once a week, it is a three hour class. We will normally meet together only on Wednesdays from 2:30 until 4:00 (not 3:50). During this time you will report on the progress of your projects, discuss problems you have encountered, present your proposals, distribute study questions and discuss the readings. When we are presenting surveys and proposals, we may need to run somewhat longer than 4:00. This will occur at most a couple of times in the semester with plenty of warning, so it should be possible to make arrangements with whatever late afternoon commitments you have. In addition each of you will meet with your for about 1/2 hour each week to discuss the details of your project. Finally, in the weeks surrounding the discussion you are to lead, you will need to arrange to meet with me to review your study questions and synopses.

Note that this *is* a three hour class and the time commitment you need to make is at least that of a three hour class. In general, given the importance of the capstone project to your education, you should plan on focusing the largest share of your attention this semester on it.

Evaluation: Each of the deliverables listed below will receive a letter grade along with, in most cases, a written evaluation. Each deliverable will have a specific due date and the grade will be reduced 1/2 letter grade for each weekday it is late. Presentations will receive no credit if they are not ready on their due date. Paper selections, study questions and synopses must meet the schedule handed out separately.

Tentatively, I am planning to weight these components roughly as follows:
Log/web page — 5%
Study questions and synopses — 10%
Discussion (participation both in discussions you help lead and those led by others) — 5%
Bibliography — 5%

Survey (written paper) — 5%
Survey (oral presentation) — 5%
Proposal (written) — 10%
Proposal (presentation) — 5%
Final paper — 15%
Final project — 25%
(In the case of a research project these previous two will be combined.)
Final presentation — 10%

Note that these weights are only for computing a letter grade for those who have completed the capstone project successfully. The criteria for success will be a component of your proposal, although these will be subject to revision (by mutual agreement) as the semester unfolds. **As the capstone project serves as our comprehensive exam, you cannot pass this seminar (and hence cannot complete the CS major) without successfully completing it.**

Tentative Schedule:
Note that you are required to attend *all* class meetings. You should come to each meeting prepared to discuss (and demo) the work you have carried out over the preceding week. The discussions are likely to continue for more than one meeting. The scheduled date is the day they will begin.

14/Jan.	First day of class.
28/Jan.	First discussion (led by me).
4/Feb.	Initial bibliography due.
11/Feb.	Second discussion.
18 & 25/Feb.	Survey presentations.
10/Mar.	Third discussion.
24/Mar..	Proposal presentations.
14/Apr.	Fourth discussion.
21/Apr.	Final draft of paper due, project should be complete. (This is two weeks prior to the end of the semester to allow time for revision.)
28/Apr.	Demo day.
Finals week	Colloquium.

Disabilities: Please let me know as early in the semester as possible if there are any adaptations or accommodations you require, if there is any emergency medical information I should know about, or if you might need special arrangements in the case that the building needs to be evacuated. 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.