Math 499: Senior Seminar: Topics in Mathematical Algorithms
Spring 11
Course Procedures

Professor: Josh Laison
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Office Hours:
Monday 2:30-4:00
Wednesday 11:30-12:30
Thursday 10:00-11:30, at the Bistro
or anytime by appointment or by catching me in my office. You can see my schedule and available times at http://www.willamette.edu/~jlaison

Class Meetings: Ford 222, 12:50–2:20, Monday and Wednesday
Course Web Page: http://www.willamette.edu/~jlaison/algorithms.html

Components of the Course:
Each of the following are worth 1/8 of your final grade.

- Homework: Class presentations (approx. 10)
- Homework: Written assignments (approx. 10)
- Course Project: Introductory class presentation
- Course Project: Section template
- Course Project: Final presentation
- Course Project: Final draft of section
- Quizzes (approx. 3)
- Class Participation/ Feedback on classmates’ presentations

Course Goals:
By the end of the course, students should:

- Gain skills in communicating mathematics, formally and informally, verbally and in writing.
- Gain skills in reading mathematics and understanding formal mathematical writing.
- Bring together mathematical content knowledge from multiple courses to use in understanding ideas in algorithms.
- Have experience producing a professional-level mathematical document and presentation.
Text: During this course, we will be writing a book on mathematical algorithms. I have written a template of Sections 1.1–1.3 of the text, which we will fill in during the first 4 weeks of class. For the rest of the text, each student in the class will write a template of one section that the rest of the class will fill in.

Homework
The gaps in our book are the homework assignments for the course. They are all indicated by boxed text. You will solve these problems, present your solutions in class, and also write your solution in LaTeX to be included in the text.

Course Project
The course project has 4 components. You will start by picking one of the section template-templates after Section 1.3 (or you may choose a different one not outlined, in consultation with me. If you think you might do this, tell me now!) For this section, you will:

- Write the template of that section. You will be provided with resource materials to help you learn the topic, and you are encouraged to talk with me frequently about this portion of your project.
- Give a 20-30 minute presentation to introduce your topic to the class, when we start working on it. You may use the whiteboards in the classroom for this presentation.
- Give a 20 minute presentation at the end of the semester to the mathematics department on your topic, using Beamer. This presentation should include mostly information already discussed in class, and a small amount of new material. Extra credit will be given to students who also give their presentation at SSRD.
- Edit your classmates’ contributions to your section for inclusion in the final version of the text. You will have final editorial say on everything in your section.

Disabilities: If you have a documented disability for which accommodations may be required in this class, please contact me to discuss your needs. Additionally, you will need to register with Disability and Learning Services in the Bishop Wellness Center within the first two weeks of class. All such discussions will be confidential.

Academic Honesty: Cheating and plagiarism are serious offenses and will be treated severely, in accordance with college policy. In addition, I am personally insulted by such behavior. So please don’t do it. These are the practices I expect you to follow in each of the components of the course:

- on the homework assignments: You may, and are encouraged to, discuss the homework with classmates. However, your submitted written work should be your own.
- on the course project: You may use other resources to write components of your project, but be careful about copying directly from other sources.
- on the quizzes: You may not consult any outside sources, living, written, or electronic.