Math 499 Seminar in Mathematics Spring 2010

Cryptology

Class:
MW 2:30 – 4:00 PM, Ford 224

Professor:
Erin McNicholas, Ford Hall 211, emcnicho@willamette.edu, 370-6590

Scheduled office hours:

Mondays	Tuesdays	Wednesdays	Thursdays	Fridays
4:00 – 5:00		4:00 – 5:00		1:00 – 2:00

If these times do not work for you, please let me know; I'm also available by appointment.

Textbook: The text has not been written yet. You will be given a set of notes that will serve as the basis for the course. The notes consist almost entirely of definitions, examples and the statements of theorems. Almost none of the usual details are supplied. Your job is to supply those details.

Goals of the course:

- Develop the skills for independent work and mathematical maturity.
- Learn the theory of Cryptology through (a) completion of proofs and exercises, (b) discussion, and (c) individual projects.
- Improve one's mathematical writing and public speaking skills.

Homework:
The homework assignments are the proofs/exercises assigned at each meeting. Each assignment will be collected at the end of the class so that you can refer to it during class. However, you are to turn in only work that you completed before class. You may talk in general terms with each other about the homework, but the work you turn in is to be your own. You may not use any inanimate objects as resources (i.e. no textbooks, websites, etc.). You may not get help from any individuals not in this class.

Quizzes:
After the completion of each chapter, there will be a quiz on five or six results taken directly from that chapter.

Project:
Each student is required to complete a Cryptology Project (see separate handout). Project grades will be based on two components: an individually written paper on your research that will be added to the class text, and an oral presentation to the class and members of the Department. Presentations should be well researched and prepared and be approximately 25 minutes in length. Presentations will be created with the LaTeX program Beamer.

Grading: Your course grade will be determined as follows:
(a) Class text (overall quality of the text and class discussions): 35%
(b) Individual homework grades (turned in assignments and problems presented in-class): 20%
(c) Individual quiz grades: 20%
(d) Individual projects and presentations: 25%

Opportunities outside the classroom:

Department colloquia: As a student in a 400-level course, according to department policy, you are required to attend four of the Mathematics Department colloquia, held generally on Thursdays 4:00 – 5:00 pm in Ford 201. Upcoming colloquia are advertised at

http://www.willamette.edu/cla/math/colloquia/index.php