Syllabus

CSRU 1100: Structures of Computer Science, Fall 2005
Department of Computer and Information Sciences
Tuesday (KE116), Friday (JMH342): 2:30-3:45

Catalog Description of Course:

An introductory course in the discrete structures used in computer and information technology. Emphasis will be placed on the ability to solve problems and develop logical thinking. Topics such as sets, functions, elementary combinatorics, discrete probability, logic, Boolean algebra, recursion and graphs will be covered through the use of algorithmic and concrete construction. The learned materials are reinforced by computer laboratory assignments.

Instructor:

- Dr. Gary Weiss
- **Office:** JMH 328A
- **Phone:** 718-817-0785
- **Email:** gweiss@cis.fordham.edu

- **Office Hours:** Tuesday, Friday 11-12; 1:30-2:15

Objectives:

To develop necessary abstract reasoning abilities while learning to succeed in a mathematical and computer environment.

Outcomes:

A student who successfully completes this course will be able to:

- Analyze and understand common mathematical notation
- Develop solutions to mathematical problems across a wide array of topics
- Use a well-defined methodology to reason about mathematical problems
- Write basic Javascript to augment original web pages.

Textbook:

Essential Discrete Mathematics for Computer Science by Todd Feil and Joan Krone

Attendance:

The majority of the learning experiences in this course occur during the scheduled class time. Therefore it is important to attend every class session. Please notify the instructor in advance if you must miss a class either personally, or through email or a phone call. Three or more unexplained absences will result in a lowering of the final grade.

Homework:

Homework will be assigned periodically and will cover all of the mathematical topics covered in class. Homework assignments will due at the beginning of class on the specified due date—typically one week from the date assigned. Whenever possible, I will try to allot time during class for you to start working on the homework assignments. Late homework assignments will generally not be accepted.

Computer Projects:

There will be four computer projects involving HTML and JavaScript over the course of the semester. The length of these projects will vary and not all will be worth the same number of points. These projects will be started in class, but most people will not be able to complete the projects during class. To complete these projects you will need a computer with access to the internet. Fordham has several computer labs available for use, but a home computer will work equally well. These computer assignments make up a significant portion of your final grade and must be completed on time. The projects will be available online from: http://storm.cis.fordham.edu/~gweiss/classes/cs1100/projects

Exams:

There will be 2 one-hour exams during the semester and a final **cumulative** examination.

Grading:

A failure to complete homework and computer projects in a timely fashion will result in a penalty and may therefore cause a reduction to the final grade. The percentages given are guidelines for both the student and instructor and may be changed as needed to reflect circumstances in the course.

Homework	12%
Computer Projects (4)	28%
Class Participation	5%
Exams (2)	30% (15% each)
Final Exam	25%

Outline of Topics:

Discrete Structures	**Computer Projects**
Propositional Logic	Web searching
Sets	Html
Functions	Javascript
Relations	
Counting and Probability	
Matrices	
Graph Theory	

Academic Honesty:

All work produce in this course should be your own unless I specifically specify otherwise. Violations of this policy will be handled in accordance with university policy which can include automatic failure of the assignment and/or failure of the course. In situations where collaboration is permitted or required you should be careful to cite any individual who provided assistance and is not already credited on the work.

Blackboard:

This class will make extensive use of blackboard. Please learn how to login and use blackboard as soon as possible. All homework assignments will be posted on blackboard and all grades will be recorded and available via blackboard.