Course: DISCRETE STRUCTURES - 32805 - CISC 1400 - L01

Lectures: T/F, 10:00am-11:15am

Instructor: Lucie Mingla

- Email: lmingla@fordham.edu
- Office hours: Tuesday, Friday 11:15am -11:45 am,
- Campus: Leon Lowenstein Building, Room # TBA
- Office: TBA

Course Description: This is an introductory course to the discrete structures used in computer and information technology. There is no prerequisite. Emphasis will be placed on the ability to solve problems and develop logical thinking. Topics including sequences, logic, set, functions and relations, elementary combinatorics, probability, matrices and graphs will be covered using algorithmic and concrete construction.

Prerequisites: There is no prerequisite for this class.


Course Outline (Topical):

- Sequences and sets
- Logic
- Relations
- Functions
- Combinatorics and Probability
- Algorithms (time permitting)
- Graph theory (time permitting)
- Web design and programming

This course fulfills the Mathematical Reasoning requirement of the Core Curriculum.

Objectives: To develop mathematical and computational reasoning abilities and to master the basics of discrete mathematics; to become more comfortable and confident.
with both mathematics and computation. A student who successfully completes this course will be able to:

- Analyze and understand common mathematical notation and concepts
- Develop solutions to mathematical problems across a wide array of topics
- Use a well-defined methodology to reason about mathematical problems
- Complete simple computer-based projects

- **Course Materials:**

**Class Notes:** Class notes (highly recommended). There will be constantly handout posted on the class blackboard. I suggest you print them out and bring them to class, and you can annotate, solve them prior to class.

**Attendance:** Attendance of lecture is mandatory. Please refer to Fordham's policy on class attendance. The total number of absence (excused or unexcused absences) cannot exceed four.

**Expectation:** Students are expected to spend three to five hours (not including the lecture and lab section) each week in the assigned reading, homework and lab projects. Students are expected to read the assigned chapter of the textbook before the Class.

**Late Assignment:** Submissions turned in late will be penalized, and no submission is accepted one week after its due date. You can write to the instructor to ask for an extension of up to one week for reasons such as illness, heavy workload or other reasons. The maximum number of extensions per person is three.

**Academic honesty:** All work produced in this course must be your own unless it is specifically stated that you may work with others. You may discuss the assignment problems with other students generally but may not provide complete solutions to one another. Copying of assignments is never acceptable and will be considered a violation of Fordham's academic integrity policy. 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. See Fordham's Undergraduate Policy on Academic Integrity for more information.
**Grading Criteria:** Final grade is based on the weighted sum of the following course works:

<table>
<thead>
<tr>
<th>Component</th>
<th>Num. of assignment</th>
<th>weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Project 1</td>
<td>lab sessions total</td>
<td>10 %</td>
</tr>
<tr>
<td>Written Assignments and HW and Class-participation, (pop quizzes)</td>
<td>6-7</td>
<td>20%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>1</td>
<td>30%</td>
</tr>
</tbody>
</table>

The mapping from number grade to letter grade is as follows:

- A = 93.0-100
- A⁻ = 90.0-92.9
- B⁺ = 87.0-89.9
- B = 83.0-86.9
- B⁻ = 80.0-82.9
- C⁺ = 77.0-79.9
- C = 70.0-76.9
- D = 60.0-69.9
- F = 0-59.9

**Attendance and class participation:** It is important to attend every class, and to arrive on time. One unexcused/unexplained absence is permitted for the semester. Attendance will be taken every day. Please actively participate in class since this will make the course more interesting for everyone! Ask questions if you are unsure about something.

**Course assignments:** There will be 5 - 6 homework and 1 lab project assigned for the course. The homework usually will be taken from problems in the textbook or like them. You will be notified at least 3- 4 days before they are due. The lab project in web design and programming HTML plus CSS (optional) will be announced at least 3 weeks before they are due; we will spend 2 sessions in the computer science lab to learn and practice the skills for this project. The projects will be presented in class and evaluated from the professor and peers. All assignments must be turned in on time.

**Exams:** There will be three exams in total: Exam 1, mid-term exam, and the Final
Electronic Devises Policy:

No electronic devices including laptops, cell-phones, headphones, etc should be used during the class, unless you are told to bring them or use them for any learning purposes. (For example, for lab classes you may be asked to bring the laptops).

**Blackboard**: Announcements, Discussions, Online materials such as handouts, slides, links to important open educational resources and websites will be posted on the Blackboard. Please check your emails and Bbd constantly and respond promptly.

**Important Note**: Every student should be aware that there is no repetition or imitation of similar problems when it comes to quizzes, tests etc. All the materials including the lectures, textbook, slides, videos and links provided as well as the HW assignments make a complete set of the knowledge for the course. A good learner is a problem solver, explorer, researcher etc. I will explain major concepts and facilitate.