Semester: Spring, 2020
Course Number: CISC 4090
Course Title: Theory of Computation
Faculty: Dr. A. G. Werschulz
Office: Rm LL 610D
Phone: (212) 636-6325
E-mail: agw@dsm.fordham.edu
WWW: http://www.dsm.fordham.edu/~agw/theory-comp
Office Hours: Mondays: 11:30 a.m.– 12:30 p.m.
Thursdays: 11:30 a.m.– 12:30 p.m.
4:00 p.m.– 5:25 p.m.
(or by appointment)

Class email list: theory-comp@dsm.fordham.edu

Course Outline (Topical):
- Introduction
- Automata and languages
  - Regular languages
  - Context-free languages
- Computability theory
  - The Church-Turing thesis
  - Decidability
- Complexity theory
  - Time complexity
  - Space complexity (time permitting)

Protocol:
Examinations: There will be one midterm examination, which will be on Thursday, February 27, taking up the entire class period. The final examination will be on Thursday, May 7, at the special time of 9:30am. Both exams will take place in the usual classroom.

Homeworks: I will assign homework problems for each chapter. Each assignment will be posted on the class website, being due as indicated. I hope to return your papers in the following class session, along with a complete set of solutions.

Your homework solutions will generally have a lot of mathematical notation. The class website has suggestions on preparing your homework solution papers.

Attendance: Learning is an interactive process that begins in the classroom, continues at home, and picks up back in the classroom. Attendance is necessary to accomplish the objectives of this course. *You are limited to four excused absences.* If you wish an absence to be excused for anything other than a true emergency, you must contact me before class (phone or email); in case of an emergency, you will need to contact me as soon as possible. Additional absences or unexcused absences will result in a marked decrease in your final grade.
Grading:
- homework 50%
- midterm exam 25%
- final exam 25%

Other Requirements:
None.

Readings: We hope to cover Chapters 0, 1, 2, 3, 4, and 7 of the text; time permitting, we might cover Chapter 8. There may also be additional handouts on material not covered in the text.

Academic Integrity: To begin with, you should familiarize yourself with the University’s policy on Academic Integrity, which may be found at http://www.fordham.edu/info/25380/undergraduate_academic_integrity_policy
Pay special attention to the Standards of Academic Integrity. As a corollary to same, you are not to pass off someone else’s solution to any homework exercise as your own, regardless of whether you obtained it from a fellow student, an acquaintance, or from the Web. Analogously, you should take all reasonable necessary steps to prevent other people from stealing your work; in particular, when you create a file on the Departmental Linux systems at Lincoln Center, it should be located in (an appropriate subdirectory of) your private directory.

You will sometimes find yourself stumped by some phase of an assignment. When this happens, you have several options, such as asking a question in class, sending me email, or discussing the problem with me in my office. It would be unrealistic of me to not expect a certain amount of discussion of assignments. However, the work you turn in is to be your own work. If you are in doubt as to the legitimacy of your actions, ask me beforehand.

Additional Remarks:
There will be no make-up exams given after the exam date. If you know in advance that you will have to miss an exam, you must check with me (in advance) to avoid getting a zero for that exam. In case of illness on an exam date, please contact me as soon as possible, so that appropriate arrangements can be made.

If you believe that you have a disabling condition that may interfere with your ability to participate in the activities, coursework, or assessment of the object of this course, you may be entitled to accommodations. If so, please schedule an appointment to speak with me immediately or you may go to the Office of Disability Services (LL207, x6282). Under the Americans with Disabilities Act and Section 504 of the Vocational Rehabilitation Act of 1973, all students, with or without disabilities, are entitled to equal access to the programs and activities of Fordham University.