Analysis of Algorithms

Fei Li[*]

- LECTURE TIME

  Tuesday, Thursday 9:00am-10:15am

- LOCATION

  Art and Design Building 203

- COURSE WEBPAGE

  `http://cs.gmu.edu/~lifei/teaching/cs483fall17/syllabus.pdf`

- CREDIT

  3

- TEXTBOOK

  Algorithm Design, by Jon Kleinberg and Eva Tardos, 2006.

- PREREQUISITES

  Grade of C or better in CS310, CS330 and MATH125

- OFFICE HOURS

  Thursday 2:00pm-4:00pm

- TA: XIAOSHENG LI

  - **email: xli22@masonlive.gmu.edu**
  - **office: Room 5321**
  - **office hours: Friday 3:00pm-5:00pm**

- GRADING POLICY:

  - **assignments** (40%)
  - **a midterm exam** (30%)
  - **a final exam** (30%)
  - $[95, 100] : A+; [90, 94] : A; [85, 89] : A-; [80, 84] : B+; [75, 79] : B; [70, 74] : B-; [65, 69] : C; [0, 64] : F$

- SYLLABUS (to be updated over time)

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Lectures	Topics	Dates	Chapters	Reading assignments
1	introduction	08/29	1	representative problems
2	some background	08/31		
3	basic	09/05		basic assignment 1
4	basic	09/07	2	
5	graph	09/12	3	graphs assignment 1 due assignment 2
6	graph	09/14		
7	greedy	09/19	4	greedy I assignment 2 due
8	greedy	09/21		assignment 3 Practice Problems: Solved Exercises, Randomly select 5 problems out of Problems 1-28 in Chapter 4
9	greedy (lectured by TA)	09/26		greedy II
10	greedy	09/28		
11	divide and conquer	10/03	5	divide and conquer I assignment 3 due Practice Problems: Solved Exercises, All Problems 1-7 in Chapter 5 assignment 4
12	divide and conquer	10/05		
Columbus Day recess		10/10		
13	divide and conquer	10/12		divide and conquer II
14	divide and conquer	10/17		assignment 4 due
15	review	10/19		scopes covered in the exam
16	midterm exam	10/24		

- POLICIES

  Please note that all coursework is to be done independently. Plagiarizing the homework will be penalized by maximum negative credit and cheating on the exam will earn you an F in the course. See the GMU Honor Code System and Policies at George Mason University Honor Code.

Lectures	Topics	Dates	Chapters	Reading assignments
17	dynamic programming	10/26		dynamic programming I
18	dynamic programming	10/31		
19	dynamic programming	11/02		dynamic programming II
20	dynamic programming	11/07		assignment 5
21	dynamic programming	11/09		
22	dynamic programming	11/14		
23	network flows	11/16		network flow I
24	network flows	11/21		assignment 5 due. assignment 6 scopes covered in the final exam
Thanksgiving recess		11/23		
25	network flows	11/28		network flow II
26	network flows	11/30		
27	network flows	12/05		network flow III
28	network flows	12/07		assignment 6 due
	final exam	12/14 (7:30am-10:15am)		

You are encouraged to discuss the material BEFORE you do the assignment. As a part of the interaction you can discuss a meaning of the question or possible ways of approaching the solution. The homework should be written strictly by yourself. In case your solution is based on the important idea of someone else please acknowledge that in your solution, to avoid any accusations.

- ACADEMIC HONESTY

The integrity of the University community is affected by the individual choices made by each of us. GMU has an Honor Code with clear guidelines regarding academic integrity. Three fundamental and rather simple principles to follow at all times are that: (1) all work submitted be your own; (2) when using the work or ideas of others, including fellow students, give full credit through accurate citations; and (3) if you are uncertain about the ground rules on a particular assignment, ask for clarification. No grade is important enough to justify academic misconduct.

Plagiarism means using the exact words, opinions, or factual information from another person without giving the person credit. Writers give credit through accepted documentation styles, such as parenthetical citation, footnotes, or endnotes. Paraphrased material must also be cited, using MLA or APA format. A simple listing of books or articles is not sufficient. Plagiarism is the equivalent of intellectual robbery and cannot be tolerated in the academic setting. If you have any doubts about what constitutes plagiarism, please see me.

- DISABILITY STATEMENT

If you have a learning or physical difference that may affect your academic work, you will need

to furnish appropriate documentation to the Disability Resource Center. If you qualify for accommodation, the DRC staff will give you a form detailing appropriate accommodations for your instructor.

In addition to providing your professors with the appropriate form, please take the initiative to discuss accommodation with them at the beginning of the semester and as needed during the term. Because of the range of learning differences, faculty members need to learn from you the most effective ways to assist you. If you have contacted the Disability Resource Center and are waiting to hear from a counselor, please tell me.