

# Analysis of Algorithms

Fei Li\*

- LECTURE TIME

**Tuesday and Thursday 10:30am-11:45am**

- LOCATION

**Blueridge Hall 129**

- COURSE WEBPAGE

<http://cs.gmu.edu/~lifei/teaching/cs483spring18/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: KUNLING ZENG

- **email:** [kzeng3@masonlive.gmu.edu](mailto:kzeng3@masonlive.gmu.edu)
- **office:** TBD
- **office hours:** Wednesday 2:00pm-4:00pm

TA: XIAOSHENG LI

- **email:** [xli22@masonlive.gmu.edu](mailto:xli22@masonlive.gmu.edu)
- **office:** TBD
- **office hours:** Friday 4:00pm-6:00pm

- GRADING POLICY:

- **assignments** (40%)

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- 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)

Lectures	Topics	Dates	Chapters	Reading assignments
1	introduction	01/23	1	representative problems
2	some background	01/25		
3	basic	01/30	2	basic
4	basic	02/01		
5	graph	02/06	3	graphs
6	graph	02/08		
7	greedy	02/13	4	greedy I
8	greedy	02/15		
9	greedy	02/20		greedy II
10	greedy	02/22		
11	divide and conquer	02/27	5	divide and conquer I
12	divide and conquer	03/01		
13	divide and conquer	03/06		divide and conquer II
14	divide and conquer	03/08		
	Spring break	03/13		
	Spring break	03/15		
15	review	03/20		
16	midterm exam	03/22		

Lectures	Topics	Dates	Chapters	Reading assignments
17	dynamic programming	03/27	6	dynamic programming I
18	dynamic programming	03/29		
19	dynamic programming	04/03		dynamic programming II
20	dynamic programming	04/05		
21	dynamic programming	04/10		
22	dynamic programming	04/12		
23	network flows	04/17	7	network flow I
24	network flows	04/19		network flow II
25	network flows	04/24		
26	network flows	04/26		network flow III
27	network flows	05/01		
28	network flows	05/03		
	final exam	05/15 (10:30am-1:15am)		

- 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.

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.