ECE358H1S Course Information Sheet University of Toronto- Winter 2018

Overview

- This sheet summarizes information for the course ECE358 H1S ("Foundations of Computing"), during the Winter term of 2018 on the St. George campus.

- Course web page: http://www.cs.toronto.edu/ fpanahi/2018-winter-ece358.html
  Course Forum: https://piazza.com/utoronto.ca/winter2018/ece358/home

- All course materials and announcements will be posted in Piazza . Any non personal questions should be posted there. For personal questions please email the instructor, include ECE358 H1S in your subject line.

- Students are responsible for reading all announcements on the course website; please check at least twice a week.

References

- **Textbook:** Introduction to Algorithms, Third Edition by Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein is available online from the University of Toronto library.
  Supplementary: S. Dasgupta; C. H. Papadimitriou; U. Vazirani, Algorithms, 2006. codename: DPV
  Supplementary: J. Kleinberg; E. Tardos, Algorithm Design, 2005. codename: KT

- See Piazza for additional references, lecture outlines and assignment's handout.

Contacts

- **Instructor:** Fatemeh Panahi, fpanahi@cs.toronto.edu

Lectures (GB 221)	**Tutorials (HA 403)**	**Office hours (BA 3219)**
Mon 16:00-17:00, **Tue, Fri** 13:00-14:00	**Wed** 18:00-19:00	**Tue** 14:15-16:00 (only by appointment)

Course Mark Composition

- **Quizzes:** 20%
  Assignments: 20% (4 problems sets 5% each)
  Midterm Test: 20% TBA (Tentative date: Feb 13 during the class time.)
  Final Exam: 40% TBA in Exam Period
  Participation (Actively engaging in lectures and tutorials and answering questions in Piazza): Extra 2%

  In order to pass the course, you must have a mark of at least 40% on the Final Exam

- Assignment details will be provided in separate handouts. Each Assignment must be completed in groups of two students. Special cases are allowed to work alone, but you would not get any extensions if you work by your own. You need to work together with your teammate on ALL the assignments' questions. Our suggestion is that the team members work together on all the questions and come up with a single solution together and then one becomes responsible to write the solution and the other team member becomes responsible to read, review and edit. Each assignment is due by 11:59pm on Fridays. The late homework submissions are not accepted, except for documented unusual circumstance see the policy on special consideration (petitions) below.
  All remarking requests must be received within one week.

- For the midterm test, you will be allowed one 8.5" 11" aid sheet, handwritten on one side.
  For the final exam, you will be allowed one 8.5" 11" aid sheet, handwritten on both sides.

Schedule

Week	Date	Event	Weight	Topic	Notes
0	Jan 5			Introduction and Background	First lecture
1	Jan 8 - Jan 12	Group formation		Divide and Conquer	
2	Jan 15 - Jan 19	Quiz 1	4%	Greedy Algorithms	
3	Jan 22 - Jan 26	A1	5%	Dynamic Programming	
4	Jan 29 - Feb 2	Quiz 2	4%	Dynamic Programming	
5	Feb 5 - Feb 9	A2	5%	Network Flow	
6	Feb 12 - Feb 16	Midterm	20%	Network Flow	
	Feb 19 - Feb 23			– No lecture, no tutorial –	Reading week
7	Feb 26 - Mar 2			Linear Programming	
8	Mar 5 - Mar 9	Quiz 3, A3	4%, 5%	Linear Programming	
9	Mar 12 - Mar 16			P/NP, NP-completeness	Drop date (Mar 14)
10	Mar 19 - Mar 23	Quiz 4	4%	P/NP, NP-completeness	
11	Mar 26 - Mar 30	A4	5%	Approximation	
12	Apr 2 - Apr 6	Quiz 5	4%	Approximation	Last lecture
	Apr 16 - Apr 30	Exam	40%		

By the end of this course, students will be familiar with standard algorithm design techniques (greedy strategies, dynamic programming, network flow and linear programming, approximations), and understand the importance of computational complexity. More specifically, students will be able to:

- recognize algorithms that employ each technique,

- write algorithms that employ each technique,

- prove the correctness of algorithms that employ each technique,

- analyze the efficiency of algorithms that employ each technique,

- demonstrate membership in P and NP,

- show NP-completeness.

Assignment submissions

- The assignment handouts will be posted in Piazza and the solutions must be submitted to Markus.

Petitions

- If you are unable to complete homework or if you miss a test due to major illness or other circumstances completely outside of your control, please contact your instructor immediately. Special consideration will be considered on an individual basis and will not be given automatically. In other words, you risk getting a mark of zero for missed work unless you contact your instructor promptly.

  In the case of illness, medical documentation must be supplied on the official University of Toronto Verification of Illness or Injury Form (see the course website for a link to this document). If you have any concerns or questions regarding your situation, please contact your instructor or your College. Registrar they are well-equipped to help you with anything you may be going through.

Policy Regarding Plagiarism and Academic Offense

- Students on a team will get the same mark for the assignments unless they both request a different division of marks in writing. All team members are expected to contribute a significant effort to the course project.

  Everything that you submit for marks (assignments, test and exam) must not contain anyone else's work or ideas without proper attribution. For assignments, course materials (textbook, slides, handouts) are always permitted but no external resources, e.g., you can't Google for solutions. In particular, your assignment must be done in isolation of other students, or other sources. You must prepare the written solutions only with your teammate. This ensures that your work is truly your own, and that your grade reflects your own understanding of the course material. Copying assignments and allowing other groups to copy your assignment are strictly forbidden. University of Toronto has strict rules against plagiarism.

Remark request policy (for assignments/test)

- You can ask for remarking through Markus if you believe there is a mistake in the marking.

  You should submit your remark request at most one week (7 days) after the marks are released. Remark requests after this date will not be accepted. We will look at all remark request, however, please try to submit a remark request only when you believe the remarking will result in a significant increase your mark, e.g. please don't submit a remark request if the total increase that can result from your remark request is less than 1% of your final grade.

  Reminder: A remarking request can cause the overall mark to stay the same, increase or decrease: we may re-examine every question in the paper and if new mistakes are found they can also change the marking up or down accordingly. Please submit a remarking request only if: (a) you have read and completely understood our posted solution set, and (b) you still think that your solution is correct and was mistakenly marked as incorrect. We rarely if ever accept remarking requests of the type "yes, my solution is not correct, but I think you took off too many marks for this mistake": The marking scheme was decided and applied as uniformly as possible to all students. If you believe a marking scheme is too harsh, it is still fair as long as it is consistently applied, we will adjust the marks (by adding points to everyone) if the marks are unexpectedly low because of marking scheme being harsh.