CS 341 – Winter 2016
Algorithms

Instructors

Name: Bin Ma
Email: binma@
Office: DC 3345
Office hours: Thursday 10am-12pm.

Name: Lap Chi Lau
Email: lapchi@
Office: DC 3120
Office hours: Monday 10am-12pm.

Lectures

Section 1: Bin Ma, WF 8:30am-9:50am, MC 2054
Section 2: Lap Chi Lau, WF 11:30am-12:50pm, MC1056
Section 3: Bin Ma, WF 1:00pm-2:20pm, MC 2038
Section 4: Lap Chi Lau, WF 4:00pm-5:20pm, MC 2038

Tutors

Four sections will share 8 TAs:

surname	givennames	userid
Alev	Vedat Levi	vlalev
Bommireddi	Venkata Abhinav	vabommir
Kushagra	Shrinu	skushagr
Scott	Joseph	j29scott
Wang	Tiancong	t258wang
Wang	Yipeng	y2257wan
Zhou	Hong	h76zhou
Zokaei Ashtiani	Mohammad Hassan	mhzokaei

Course Description

The objective of this course is to study efficient algorithms, effective algorithm design techniques and approaches to handling situations in which no feasible algorithms are known. The course is intended to give the student experience in program design and to emphasize both pragmatic and mathematical aspects of program efficiency.

Course Text

The lectures will mostly be covering material from the textbook Algorithm Design by Jon Kleinberg and Éva Tardos, Pearson Education Inc. 2005.

Posting Lecture Slides and Course Information

The lectures slides, syllabus, assignments, assignment solutions and student marks will be posted on Learn at https://learn.uwaterloo.ca.

Announcements and discussions about the course material or assignments will take place on Piazza (https://piazza.com/class/iixb0lnf7s36ql).

Course requirements

Open to Computer Science students only.
Prerequisites: CS 240 and MATH 239/249
Anti-requisites: SE 240, SYDE 423

Evaluation

Assignments   25% - a mixture of programming and written solutions to problems
Midterm Exam   25%
Final Exam   50%

Schedule of Exams and Assignment Tentative Due Dates

- Assignment 1: due Jan. 25, 11pm.
- Assignment 2: due Feb. 8, 11pm.
- Midterm, Feb. 24, 2016, 7:00-8:50 PM
- Assignment 3: due Feb. 29, 11pm
- Assignment 4: due Mar. 14, 11pm
- Assignment 5: due Mar. 28, 11pm
- Final Exam: to be scheduled by the Registrars' Office

Submitting Assignments

Assignments are due at 11PM and are to be submitted electronically on the school's system (linux.student.cs.uwaterloo.ca).

Late Assignments

- Late submissions will be accepted up to 24 hours after due date.
- There will be a penalty of 25% for accepted late submissions. □
  No assistance will be given after the due date.

You must notify your instructor of any severe, long-lasting problem that prevents you from doing an assignment and submit the current version of the Verification of Illness form, https://uwaterloo.ca/health-services/sites/ca.health-services/files/uploads/files/VIFonline.pdf.

No Makeup for Midterm
There will be no deferred/makeup midterm exam. Under extenuating circumstances that are pre-approved, where a student is unable to write the mid-term, the instructor will assign a higher weight to student's final exam.

Regrading Request
Requests for regrading will be accepted up to 14 days after students have the opportunity to pick up their assignments or midterm. Details of how to request a regrade will be posted in Piazza after the first assignment is due.

Retention of Assignments and Midterms
Unclaimed midterms assignments will be retained for one month after the term grades become official in Quest. After that time, they will be destroyed in compliance with UW's confidential shredding procedures.

Major Topics covered in this course
- Divide-and-Conquer Algorithms
- Greedy Algorithms
- Graph Algorithms
- Dynamic Programming Algorithms
- Intractability and Undecidability

Academic Integrity
In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. All members of the UW community are expected to hold to the highest standard of academic integrity in their studies, teaching, and research. The Office of Academic Integrity's website (https://www.uwaterloo.ca/academicintegrity) contains detailed information on UW policy for students and faculty. This site explains why academic integrity is important and how students can avoid academic misconduct. It also identifies resources available on campus for students and faculty to help achieve academic integrity in — and out — of the classroom.

Grievance
A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4,
https://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm

Discipline
A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about 'rules' for group work/collaboration should

seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offences and types of penalties, students should refer to Policy 71 - Student Discipline, https://www.adm.uwaterloo.ca/infosec/Policies/policy71.htm

Avoiding Academic Offences:
Most students are unaware of the line between acceptable and unacceptable academic behaviour, especially when discussing assignments with classmates and using the work of other students. For information on commonly misunderstood academic offences and how to avoid them, students should refer to the Faculty of Mathematics Cheating and Student Academic Discipline Policy,
https://www.math.uwaterloo.ca/navigation/Current/cheating_policy.shtml

Appeals:
A student may appeal the finding or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals, https://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm