

1 Prerequisites and description

Prerequisites: C or better in CMSC 132, and MATH 141

Credits: 4 credits

Fundamental mathematical concepts related to computer science, including finite and infinite sets, relations, functions, and propositional logic. Introduction to other techniques, modeling and solving problems in computer science. Introduction to permutations, combinations, graphs, and trees with selected applications.

2 Instructor contact information

Sections 0101 and 0102	Sections 0201 and 0202
Bill Gasarch 3245 A. V. Williams, 405-2698 gasarch@cs.umd.edu M 1:00-2:00, Tu 11:00-1:00	Larry Herman 1111 A. V. Williams, 405-2762 larry@dc.umd.edu M 4:00-5:00, F 10:00-11:00

Office hours also by appointment.

3 Textbook and class webpage

Text: *Discrete Mathematics with Applications*, third edition, Susanna Epp, Brooks/Cole- Thomson Learning, 2004, ISBN 0-534-35945-0

Webpage: <http://www.cs.umd.edu/class/spring2005/cmcs250>

You are expected to visit the class webpage regularly for updates on course information.

4 Topics

1. Propositional logic, circuits, and predicate logic (Chapters 1 and 2), approx. 4 weeks
2. Elementary number theory (Chapter 3), approx. 2 weeks
3. Summations, recurrences, and mathematical induction (Chapter 4), approx. $2\frac{1}{2}$ weeks
4. Sets, Venn diagrams, Cartesian products, powersets (Chapter 5), approx. $1\frac{1}{2}$ weeks
5. Counting and combinations (Chapter 6), approx. $1\frac{1}{2}$ weeks
6. Functions and the pigeonhole principle (Chapter 7), approx. $1\frac{1}{2}$ weeks
7. Relations, reflexivity, symmetry, and transitivity (Chapter 10), approx. 1 week
8. Graph theory (Chapter 11), approx. 1 week

5 Teaching assistants and TA office hour information

<u>Discussion sections</u>	<u>Name</u>	<u>Email address</u>	<u>Office hours</u>
0101, 0102	Adam Bender	cs250001@dc.umd.edu	M & Tu 5:00-6:30
0201, 0202	Matt Mah	cs250002@dc.umd.edu	Tu 9:45-10:45, W 12:00-2:00
grader for 0101	Martin Ma	cs250003@dc.umd.edu	Th 1:00-3:00
grader for 0102	Yao Wu	cs250004@dc.umd.edu	Tu 2:45-3:45, F 4:00-5:00
grader for 0202	Azarakhsh Malekian	cs250005@dc.umd.edu	Tu 1:00-3:00

All the TAs' office hours will be held in 1112 A.V. Williams.

Section 0201 will be graded on a rotating basis by the different grading TAs.

	Monday	Tuesday	Wednesday	Thursday	Friday
9					
10	discussion	Matt	discussion		Larry
11	discussion	Bill	discussion		
12			Matt		
1	Bill	Azarakhsh		Martin	
2	010X lecture		010X lecture		010X lecture
3	020X lecture	Yao	020X lecture		020X lecture
4	Larry				Yao
5	Adam	Adam			
6					

6 Policies

Besides the policies in this syllabus, various University policies may apply to students during the semester. Various policies which may be relevant appear in the Undergraduate Catalog at www.umd.edu/catalog.

If you experience difficulty during the semester keeping up with the academic demands of your courses, you may consider contacting the Learning Assistance Service in 2201 Shoemaker Building at (301) 314-7693. Their educational counselors can help with time management issues, reading, note-taking, and exam preparation skills.

7 Grading

7.1 Weights

Coursework will count toward the final grade according to the following percentages:

Homework:	assigned weekly	15%	(equally weighted)
Quizzes:	weekly in discussion section	15%	(equally weighted)
Midterms:	two midterms	40%	(equally weighted; 20% each)
Final:	will be comprehensive	30%	

7.2 Exams

Exams will be two hours long and will be given **outside of class time** in the evening (anticipating 6:00-8:00 on the dates below), with all sections taking the same exam at the same time. Excused absences for exams are discussed below.

Anticipated exam dates:

- Midterm #1: Thursday, February 24, evening, location TBA
- Midterm #2: Thursday, April 7, evening, location TBA
- Final: Wednesday, May 18, 4:00–6:00, location TBA

The midterm dates may need to be changed if the pace of lecture coverage requires it, or for other reasons, such as for example if the University is closed due to weather and as a result the necessary material hasn't been covered in class before the scheduled exam date. However, the final exam date and time are **fixed**. The final exam will be rescheduled **only** for students having another final at **exactly** the same time, or for students with more than three final exams scheduled on the same day. (The only students whose finals are at the same time as this course's final should be those also taking BMGT 364, EDMS 410, ENES 102, or ENES 220.) If either of these situations applies to you, you must inform your instructor **during the first three weeks of the semester** for any allowances to be made.

7.3 Quizzes

Quizzes will be given every Monday during your discussion section. Unless you have an excused absence (see below), to receive credit you must take a quiz during **your own** discussion section time.

7.4 Homework

Homework will be handed out in discussion section on Wednesdays and collected the following Wednesday. There will be no homework due during weeks there is an exam. Homework is due at the beginning of the discussion section that you are registered for on Wednesday as indicated on the homework assignment. ("In the beginning" means that it must be turned in within the first 10 minutes of discussion.) If you are late to your discussion section without an excused absence (described below) you will be permitted to submit the homework up until the **end of your own** discussion section that same day, but it will be worth at most 50% of the points possible. Homeworks are only accepted in person in class—homeworks given to another TA, left in anyone's mailbox, etc., will not be accepted. Turning in a homework anytime after your own discussion section time without valid documentation will result in no credit for that homework. You must work alone on your homework, and homework answers must be written legibly, single-sided on your own paper with the answers clearly labeled and in sequential order as assigned (read further rules on homework description). You must put your name, your university ID number, the name of your TA and the time of your lecture and discussion section in the upper right-hand corner of your homework. Staple all pages together, and be sure that your name is on every sheet.

7.5 Worksheets

Worksheets will contain practice problems to be done during discussion section, usually on Mondays. These worksheets are in-class exercises in preparation for the next quiz and will not be collected or graded, and they will only be available in person during the discussion section the day they are done.

7.6 Excused absences

Reasons for missing coursework such as illness, religious observance, participation in required university activities, or family or personal emergency (such as a serious automobile accident or close relative's funeral) will be considered to justify an excused absence. However, students requesting an excused absence for any reason must apply in writing and must furnish documentary support for the assertion that the absence qualifies as an excused absence.

For an absence due to medical reasons, for example, documentation would be from a health care professional who treated you. In cases of illness, simply being seen by a health professional is insufficient—medical documentation must state that you were **incapacitated** and therefore unable to attend for an excused absence to be justified. For medical absences the documentation **must** include the phone number of the health care professional and **must** explicitly indicate the exact dates or times of incapacitation due to illness. The dates of incapacitation must **include** the date of the missed coursework. Self-documentation of illness is not sufficient support to excuse an absence. **If you become ill, keep in mind that the University Health Center will not provide medical documentation.**

It is the University's policy to provide accommodations for students with religious observances conflicting with coursework, but it is the **student's responsibility** to inform their instructor **in advance** of intended religious observances. Written notice must be provided **immediately** in order for an absence to be excused, and if a known conflict exists with one of the tentative midterm dates appearing above, notice must be given soon after receiving this syllabus.

Since exams are given outside of the regular class time, excused absences for exams will include documented reasons such as employment (you have a job and must be at work during the exam time), or being enrolled in another course which conflicts with the exam time.

Excused absences will not be given unless documentation as described is provided. Also, **immediate notice is required** as early as possible of the reason for any missed coursework— in advance unless impossible— otherwise a student **may not receive** an excused absence. An excused absence will not be granted after performing coursework, for instance, you cannot take an exam and then claim to have been ill. Note that the policies for excused absences may be stricter than those which other courses or departments may follow.

A student who might miss an exam for any reason other than those mentioned above must contact their instructor **in advance** to discuss the circumstances. An instructor is not under obligation to offer a substitute assignment or to give a student a makeup assessment unless the failure to perform was due to an excused absence.

When a student has an excused absence:

- For an exam: A combined makeup exam will be given at the same time to any students who have excused absences for the regular administration of the exam. Students missing an exam for an excused reason must contact their instructor as soon as possible so arrangements when the makeup exam is to be taken can be made.
- For a homework: Students unable to turn in a homework due to an excused absence will be given a **short** extension (such as an extra day in typical cases); contact your instructor as soon as possible in such cases for appropriate arrangements to be discussed.
- For a quiz: after documenting the excused absence with their instructor their teaching TA will be informed, and the student must then arrange with their teaching TA to take a makeup quiz as soon as possible.

7.7 Students with disabilities

Students with disabilities who have been certified by Disability Support Services as needing any type of special accommodations should see their instructor as soon as possible, during the schedule adjustment period.

All arrangements for exam accommodations as a result of disability **must** be made and arranged with the student's instructor **at least** three business days prior to the exam date, or accommodations **can not** be made.

8 Academic integrity

The Campus Senate has adopted a policy asking students to include the following statement on each examination or assignment in every course: "I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment)." Consequently, you will be requested to include this pledge on each exam and homework.

You are permitted to discuss what the homework **problems** are asking with your classmates, but your **solutions** must strictly be your own work (other than any help from the instructional staff).

Any evidence of cooperation on homework assignments, on quizzes or exams, or use of unauthorized materials while taking a quiz or exam, or other possible violations of the Honor Code, **will be submitted** to the Student Honor Council, which could result in an XF for the course, suspension, or expulsion.

If you have any question about whether a particular situation would be an academic integrity violation then consult with their instructor in advance. Should you have difficulty with the coursework you should **see the teaching assistants in office hours**, NOT solicit help from anyone else in violation of academic integrity rules.

IT IS THE RESPONSIBILITY, UNDER THE HONOR POLICY, OF ANYONE WHO SUSPECTS AN INCIDENT OF ACADEMIC DISHONESTY HAS OCCURRED TO REPORT IT TO THEIR INSTRUCTOR, OR DIRECTLY TO THE HONOR COUNCIL.

Every semester our department has discovered a number of students attempting to cheat on their coursework, in violation of academic integrity requirements. Students' academic careers have been significantly affected by a decision to cheat. Think about whether you want to join them before contemplating cheating, or before helping a friend to cheat.

Students are welcome and encouraged to study and compare or discuss their homework, quiz, and exam answers with any others **after** they are graded.

9 Right to change information

Although every effort has been made to be complete and accurate, unforeseen circumstances arising during the semester could require the adjustment of any material given here. Consequently, given due notice to students, the instructors

reserve the right to change any information on this syllabus or in other course materials.

10 Copyright

All course materials are copyright the instructors (and other instructors in the computer science department) © 2005. All rights reserved. Students are permitted to use course materials for their own personal use only. Course materials may not be distributed publicly or provided to others (excepting other students in the course), in any way or format.