

Foundations of Discrete Mathematics
COT 2104
Summer 2008

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Prerequisites

Minimum grade of C in MAC 1105 (College Algebra) or departmental permission.

Course Description:

This course builds basic mathematical logic skills and foundations of discrete mathematics. It is designed for IT Pre-Majors seeking the AA degree. Topics include statements; truth tables and tautologies; arguments; rules of demonstrations; conditional demonstrations and indirect proof; logic of quantifiers; algebra of sets; definitions and axioms of set theory; informal proof; relations and functions; mathematical induction; integers and other topics in discrete mathematics.

Withdrawal Policy

If you choose to withdraw from this class, you must fill out a withdrawal **form by Friday, June 27, 2008** in which case you will receive a grade of **W**. **After the withdrawal deadline**, a withdrawal will result in a grade of **WF** or **WP**.

Please note that I will not withdraw students who fail to attend class for an extended period of time. **Any student who wishes to withdraw must withdraw themselves.** Any student who does not attend the final exam will receive a grade of WF in the course regardless of their grade when they stopped attending class.

Textbook

There is one required textbook for this course: Discrete Mathematics with Graph Theory, Third Edition, by Goodaire and Parmenter.

Homework

The homework problems are designed to strengthen your understanding of the material and prepare you for the chapter test and final test. Homework will be collected at the beginning of the corresponding meeting (see the schedule below) and graded lately.

Grade Distribution

You can earn a total of 600 points in this class. The point distribution is as follows:

300 Points – 3 Homework assignments (divided in three sections each), 100 points each whole homework assignment.

200 Points- 2 Exams, 100 points each.

100 Points- Final Examination (**Mandatory**).

Please note that two points will be deducted from your grade total for each missed class.

Your grade will be assigned as follows:

540-600 Points – A

480-539 Points – B

420-479 Points – C

360-419 Points – D

< 360 Points – F

Attendance

You are expected to attend class regularly. Attendance will be taken at the start of each class. You are responsible for any material covered, in-class assignments that are to be turned in, announced tests, and/or assignments given during an absence. Attendance is mandatory and if you cannot attend class for any reason it is your job to contact a classmate to determine what material you missed.

Exam Dates

There will be makeup exams for any reason at all whatsoever. If something prevents you from taking an exam, you will contact your instructor before the exam to discuss the possibility of working out an alternative time to take the exam at the instructor's discretion and convenience. If you fail to contact the instructor before the scheduled exam time, you will receive a zero on the exam no matter why you missed it. There will be no exceptions to this rule at all whatsoever.

Schedule

Week	Date	Coverage	Test/Homework
1	May 5	Chapters 0 Introduction	
2	May 12	Chapter 1 Logic	Hwk I Section 1
3	May 19	Chapter 2: Sets and Relations	Hwk I Section 2
4	May 26	Holiday	
5	June 2	Test I	Hwk I Section 3 and Test I
6	June 9	Chapter 3: Functions	
7	June 16	Chapter 4: The Integers	Hwk II Section 1
8	June 23	Chapter 5: Induction and Recursion. Chapter 6: Principles of Counting	Hwk II Section 2
9	June 30	Test II	Hwk II Section 3 and Test II
10	July 7	Chapter 8: Algorithms	Hwk III Section 1
11	July 14	Chapter 9: Graphs and Chapter 10: Paths and Circuits	Hwk III Section 2
12	July 21	Chapter 12: Trees	
13	July 28	Final Test (mandatory)	Hwk III Section 3 and Final Test

Valencia's Core Competencies

Valencia's Student Core Competencies are complex abilities that are essential to lifelong success. These general competencies can be applied in many contexts and must be developed over a lifetime. We will apply the core competencies in this course in the following ways:

Competency	Meaning	How You Will Apply It (to get a good grade!)
THINK	Think clearly, critically, and creatively. Analyze, synthesize, integrate, and evaluate in many domains of human inquiry.	Assignments will require you to apply concepts you have learned to class to different situations.
COMMUNICATE	Communicate with different audiences using varied means.	Ask questions when something are unclear. Work with other students to understand material.
VALUE	Make reasoned value judgments and responsible commitments	Plan your time accordingly and be prepared.
ACT	Act purposefully, reflectively, and responsibly.	Complete all assignments on time.

CLAST Objectives

This course will reinforce the CLAST objectives. You will be expected to demonstrate competency in reading skills, mathematics skills, algebra skills, statistics skills, and logic reasoning skills.

Learning Community

The learning community consists of 4 elements: Professor, Student, Course Content and the Physical Environment. As your professor I serve to introduce you to the material, give examples and explanations, and serve as a helpful resource in my office hours. It is my job to empower you to become a successful learner. As the student you must explore all resources available that are needed to help you be successful. You must realize that the learning is ultimately your responsibility through attending class lectures, reading the book, attempting homework and using any other tools you feel might individually help you. Whether or not you feel the course content is exciting or boring should not govern the amount of time and energy that you put into learning the content. Keeping a positive attitude always helps and thinking negatively will affect you mentally by making you less motivated. The physical environment refers to the classroom in which the content is presented. If you are respectful of your fellow students and keep the classroom as a proper learning environment (without any unnecessary interruptions) then the maximum amount of learning will take place in the environment.

Communication

I will communicate to you mainly during our contact in class. However, I will use your Atlas email account as a means of contacting you regularly. It is your responsibility to check and read your Atlas email frequently. I will assume that you check your Atlas email just as you check your mailbox at home, and claiming that “Atlas was down” will not be considered a legitimate excuse when ample time (at least 24 hours) is given to check your mail. If there is a problem with your Atlas account, it is your responsibility to contact Atlas support and get the problem fixed.

If you already have a personal email account through another internet service provider like AOL, EarthLink, Yahoo, etc., you forward your Atlas email to that existing account. To do so, follow these steps:

1. Go to your Atlas email.
2. Click the OPTIONS Tab
3. Click the AUTOFORWARD option
4. Enter the address to forward and click OK
5. Make sure to EXIT and LOGOUT properly to save the settings
6. Send an email to your Atlas account to test that it forwards.

Extra Credit Policy

Extra credit assignments, if offered, will be designed to extend the material learned in class. Extra credit opportunities will never be available to a single individual without being extended to the entire class. Due dates for extra credit will be strictly enforced. Late extra credit assignments will receive no credit regardless of the period of lateness. Extra credit programming assignments that do not work will receive no credit at all.

Students with Disabilities

Students with disabilities who qualify for academic accommodations must provide a letter from the office for Students with Disabilities (OSD) and discuss specific needs with the professor during the first two weeks of class. The office for students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, ext 1523). The needs of students with appropriate documentations will always be supported in class.

Academic Honesty and Conduct

Each student is expected to behave appropriately in class. Any student caught cheating on an exam will receive a grade of zero on that exam. In addition, a course grade of “F” may be assigned at the instructor’s discretion.

Cell Phone/Pager Policy

Before entering my classroom, all cell phones and pagers must be silenced. Ringing phones are not permitted and may result in your ejection from class.

DISCLAIMER: Changes to this syllabus may be at any time by announcement of the professor.

Tips from Valencia Faculty (excerpted from the Student Handbook)

Let’s face it- faculties were successful students – that’s how they were able to complete college and graduate school! Here some tips from Valencia faculty who know what it takes to make it:

1. **Read and understand the course syllabus.** It will tell you what the professor expects, what her/his priorities are for your learning, and what/when assignments are due.
2. **Build a master calendar with all your work and school obligations, including time for studying and homework.** This help you see in advance and plan for two assignments due in one day, for example. It will help you be proactive rather than reactive in approaching your academic assignments.
3. **Don’t skip class EVER (unless you are very sick or have a real emergency).** Attendance does count, even if the professor does not take roll. Look at this way –

- when you buy a car, you'd be upset if it came with a tire or a radio missing. You have paid your college education. Don't rob yourself by missing classes..
4. **Do all assignments on schedule.** Falling behind is self-perpetuating, and coming to class unprepared makes you feel less able to understand new material and ask meaningful questions.
 5. **Investigate student support services.** Tutoring, computer lab, writing and language labs, advising and counseling services, library resources, a career center – all are available free of charge. Use them early and often to strengthen your work and hence, your grades!
 6. **Don't drop a course without first talking to your professor and/or an advisor.** There may be solutions to your difficulties that you do not see on your own, or consequences to dropping a course that you do not know.
 7. **Set reasonable academic and personal goals each semester.** A major difference between students who do well and who don't is that students who succeed have clearly defined, reasonable goals.
 8. **Accept personal responsibility for your academic progress.** Successful students tend to be realistic and recognize that their success or failure is primarily determined by their own efforts. Students who are not successful often blame outside forces (professors, work, and family) for their lack of progress.
 9. **Success is a choice. Your choice.**