MATH 261: Discrete Mathematics

Spring 2012 **Section 001** **3 credit hours**

Instructor: Mr. Hipp
Office: Bancroft 169
Office Phone: 803-323-4548
Math Department: 803-323-2175
Campus Email: hippb@winthrop.edu
Website: http://faculty.winthrop.edu/hippb

Course Days: MWF
Course Time: 10:00-10:50am
Course Location: Owens 110

Office Hours: MWF 12:00-1:00pm
TTh 8:00-9:00am
Additional office hours are available by appointment

The instructor reserves the right to make modifications to this syllabus. Students will be notified in class & by email.

Winthrop University is dedicated to providing access to education. If you have a disability and require specific accommodations to complete this course, contact the Office of Disability Services (ODS) at 323-3290. Once you have your official notice of accommodations from the Office of Disability Services, please inform me as early as possible in the semester.

Course Description and Objectives

This course is a study of discrete mathematics concepts, particularly those used in the field of computer science. Students will be introduced to various numeration systems, including binary and hexadecimal; elementary set theory, logic and combinatorics; recursion, mathematical induction, elementary matrix operations and Boolean algebra.

Student Learning Outcomes

- Students will formulate and solve linear recurrence relations.
- Students will use reasoning skills to solve problems in combinatorics and graph theory.
- Students will write formal mathematical proofs of theorems.

Grade Computation

Homework	15%
Tests (4 at 15% each)	60%
Cumulative Final Exam	25%
	100%

Grading Scale

A	93%-100%	B+	87%-89%	C+	77%-79%	D+	67%-69%
A-	90%-92%	B	83%-86%	C	73%-76%	D	63%-66%
		B-	80%-82%	C-	70%-72%	D-	60%-62%
						F	0%-59%

Important Dates

Tests: 2/1; 2/24; 3/26; 4/18 **Final Exam:** 8am on F, 4/27 **SU Deadline:** 1/24 **Withdrawal Deadline:** 3/7

Attendance Policy

The University Attendance policy as stated in the current catalog (http://www.winthrop.edu/recandreg/default.aspx?id=7380) if a student's absences in a course total 25 percent or more of the class meetings for the course, the student will receive a grade of N if the student withdraws from the course before the withdrawal deadline; after that date, unless warranted by documented extenuating circumstances as described in the previous section, a grade of F or U shall be assigned.

Text and Materials

Required Text: Maurer, S. and Ralston, A. (2004). *Discrete Algorithmic Mathematics* Third Edition.

Policies

1. Review the student code of conduct for university polices on academic misconduct. Academic misconduct will not be tolerated and will result in a failing grade on the assignment and/or in the course. The full handbook is available online at: (http://www2.winthrop.edu/studentaffairs/handbook/StudentHandbook.pdf)
2. All electronic devices (including cell phones) other than a calculator should be set to silent and kept in your book bag or purse throughout class time unless otherwise instructed. (Note: if you have an educational, health, or physical reason for an electronic device you must work with your instructor to inform the instructor of the accommodation.)
3. If you miss class, you are responsible for obtaining the notes from a fellow student and the assigned homework problems from the course webpage.
4. Late homework submissions will not be accepted.
5. Students may not use cell phones, MP3 players, or other electronic devices in place of a calculator. Students may not share calculators during the tests or final exam. Any student caught using an unapproved electronic device during a test or the final exam will receive a grade of zero on that assessment.
6. Tests are to be taken on the date scheduled. Make up tests will only be given due to extenuating circumstances as determined by the instructor. If you know that you must miss a test, contact your instructor prior to the test date.

Tentative Course Schedule

Date		Sections in Text	Topics
Monday	1/9	Chapter 0 Chapter 1	Sets Number Bases Matrices Analysis of Algorithms
Wednesday	1/11		
Friday	1/13		
Wednesday	1/18		
Friday	1/20		
Monday	1/23		
Wednesday	1/25		
Friday	1/27		
Monday	1/30		
Wednesday	**2/1**	**Test One**	
Friday	2/3	Chapter 2 Chapter 3	Proof by Induction Graphs and Trees
Monday	2/6		
Wednesday	2/8		
Friday	2/10		
Monday	2/13		
Wednesday	2/15		
Friday	2/17		
Monday	2/20		
Wednesday	2/22		
Friday	**2/24**	**Test Two**	

Date		Sections in Text	Topics
Monday	2/27	Chapter 4	Counting
Wednesday	2/29		
Friday	3/2		
Monday	3/5		
Wednesday	3/7		
Friday	3/9		
Monday	3/19		
Wednesday	3/21		
Friday	3/23		
Monday	**3/26**	**Test Three**	
Wednesday	3/28	Chapter 7 Chapter 5	Logic Difference Equations
Friday	3/30		
Monday	4/2		
Wednesday	4/4		
Friday	4/6		
Monday	4/9		
Wednesday	4/11		
Friday	4/13		
Monday	4/16		
Wednesday	4/18	**Test Four**	
Friday	4/20	Review for Final Exam	
Monday	4/22		