Course Syllabus

Professor: Dr. Christine Heitsch **Office:** Skiles 211B **Phone:** (404) 894 - 4758

Email: heitsch@math.gatech.edu **Webpage:** http://www.math.gatech.edu/~heitsch

Office Hours: Tues, Thurs from 2:00 – 2:30pm, after lecture, and by appointment.

Lectures: Tues, Thurs from 3:05 – 4:25 in Howey (Physics) L2.

Textbook: *Linear and Discrete Mathematics/Custom Ed.* from Prentice Hall (0-536-50344-3).

Course Description: "The basics of mathematical induction and recursively defined sequences; complexity and rates of growth; combinatorics, counting methods, and elementary probability; graph theory and graph algorithms; linear algebra; linear programming and the simplex method."

Prerequisites: Math 2401: Calculus III (or equivalent).

Course Topics: See http://www.math.gatech.edu/course/math/2602.

Sections: Mon, Wed from 4:05 – 4:55.

Number	CRN	Room	TA	Email
L1	81848	Skiles 255	Geehoon Hong	geehoon@math.gatech.edu
L2	81835	Skiles 246	Albert Bush	abush9@math.gatech.edu
L3	82465	Skiles 254	Thao Vuong	tvuong@math.gatech.edu

Grading Scheme: Grades will be calculated according to the following distribution:

30% Final Exam

60% Three Midterm Exams (20% + 20% + 20%)

10% Quizzes

Grades will be assigned on the standard scale:
A 90 or higher **B** 80 – 89 **C** 70 – 79 **D** 60 – 69 **F** Below 60

On an individual basis, significant improvement over the semester will be taken into account. The overall class distribution will also be carefully considered.

Final Exam: The final exam is scheduled for Thursday, December 16th in the midday from 11:30am - 2:20pm. The exam will be cumulative and count for 30% of the final grade.

Midterm Exams: There will be three in-class exams, each counting for 20% of the final grade, for a total of 60%. The exams will be closed book, closed notes, no calculator, individual tests. The tentative exam dates are:

Midterm 1 Wednesday, September 15th

Midterm 2 Wednesday, October 13th

Midterm 3 Wednesday, November 10th

Exam dates will be confirmed at least a week in advance.

Quizzes: There will be a short quiz on Wednesdays in section, except for exam weeks. Problems on the quiz will be similar (but not necessarily identical!) to the recommended study problems, listed on the course webpage `http://www.math.gatech.edu/~heitsch/2602l-f10.html`.

The lowest quiz score will be dropped from the overall quiz average.

Attendance: Regular attendance in lecture and section is expected. Exceptions will be accommodated only for valid, documented reasons including (1) official representation of the Institute and (2) medical emergencies.

Makeups: No makeup exams or quizzes will be given.

Extra credit: There will be a few opportunities to earn extra credit over the course of the semester. Extra credit is due at the scheduled time, and late submissions will not be accepted. The total score for extra credit (as a percentage) can be used to replace one quiz score.

Exceptions: Anyone unable to meet the requirements of the class as stated must contact the instructors (both the professor and section TA) within the first two weeks of class.

Academic Integrity: Students are reminded of the obligations and expectations associated with the Georgia Tech *Academic Honor Code* and *Student Code of Conduct*, available online through the Office of Student Integrity (`http://www.osi.gatech.edu/`) and the Honor Advisory Council (`http://www.honor.gatech.edu`).

Any violations must be reported directly to the Dean of Students.

Additional problems: In addition to the suggested study problems, the book contains numerous other exercises. You are strongly encouraged to work through enough problems, on your own and/or with other students, to master the course material.

Additional Resources:

- T-Square — `http://t-square.gatech.edu`
- 2602L webpage — `http://www.math.gatech.edu/~heitsch/2602l-f10.html`
- Math Lab – `http://www.math.gatech.edu/academics/undergraduate/tutors-and-labs`
- Other Campus Tutoring and Academic Services – `http://www.successprograms.gatech.edu/academicsupport/index.php`

Updates: This syllabus is subject to modification. Any changes will be announced in class and posted on the course website.

Georgia Institute of Technology

Math 2602 (G) - Linear and Discrete Mathematics – Spring 2012

	Room	Days/Time
Lectures	Howey (Physics) L3	MWF 1:05 – 1:55 pm
Sections	Skiles 269, 170, 168	TR 1:05 – 1:55 pm

Instructor: Prof. J. Yu
Office Hours: Mondays and Wednesdays at 10-11 am and by appointment
Contact info: Skiles 223, jyu@math.gatech.edu, (404)894-4754
Webpage: http://people.math.gatech.edu/~jyu67/teaching/2012Spring2602/ and t-square.
Textbook: *Linear and Discrete Mathematics*, special edition for Georgia Tech.

Topics: Set theory, induction, recurrence relations, complexity, permutations and combinations, counting, probability, graph and tree algorithms, solving linear equations, eigenvalues/vectors, linear programming. (See course website for a schedule of topics.)

Sections: Sections meet on Tuesdays and Thursdays at 1:05 – 1:55 pm. You must attend the section in which you are registered.

Section	CRN	Room	TA	Email	Office	Office hours
G1	20593	Skiles 269	R. Krone	rkrone@math.gatech.edu	Skiles 149	
G2	20592	Skiles 170	C. Liu	cliu87@math.gatech.edu	Skiles 146A	R 2-3
G3	23581	Skiles 168	J. Conway	conway@math.gatech.edu	Skiles 146B	R 12-1

Homework: Homework problems will be assigned on the course website. They will not be collected or graded. You are encouraged to work together and check homework solutions with each other.

Quizzes: There will be a quiz during the first 10 minutes of section on Thursdays, except during the weeks of exams. The lowest quiz score will be dropped. No make-up quizzes will be given.

Exams: There will be 3 in-class exams and a comprehensive final exam. The lowest in-class exam score will be dropped. No make-up exams will be given. The dates are:

Exam 1	Feb 3
Exam 2	Mar 2
Exam 3	Apr 13
Final	Apr 30 (2:50 - 5:40 pm)

Grading: The usual ten-point scale will be used (A: 90-100%, B: 80-89%, C: 70-79%, D: 60-69%, F: 0-59%). If necessary, I may "curve down" (but not up) to arrive at a standard grade distribution. The following weighting is used to compute the grades:

Quizzes	10 %
Best two exams	25 % each
Final Exam	40 %

Academic Honesty: All students must be aware of their individual responsibilities under the Georgia Tech Academic Honor Code, which will be strictly adhered to in this class.

Mathematics 2602: Linear and Discrete Mathematics

Section L, Fall 2011, Georgia Institute of Technology

http://www.math.gatech.edu/~margalit/classes/math2602

Professor

Prof. Margalit, Skiles 221, *margalit@math.gatech.edu*, (404) 894-2715.

Class Meetings

Lectures are Tuesdays and Thursdays, from 3:05 until 4:25 pm in Howey Physics Building, room L2.

Required Text

Linear and Discrete Mathematics, Special edition for the Georgia Institute of Technology.

Office Hours

Tuesday and Wednesday from 1:00 to 2:00, and by appointment.

Homework and Quizzes

Homework will be assigned on the course web site. It will not be collected or graded. The quizzes will consist of problems that are similar to homework problems. The lowest quiz score will be dropped.

Sections

Section	CRN	Classroom	Teaching Assistant	Email	Office
L1	81801	Skiles 255	Geehoon Hong	geehoon@math.gatech.edu	Skiles 146A
L2	81794	Skiles 246	Ke Yin	kyin@math.gatech.edu	Skiles 161
L3	82416	Skiles 169	Yun Gong	ygong@math.gatech.edu	Skiles 145

You must go to your assigned section. TA office hours will be announced on the course web site.

Grading

Your grade will be computed using one of the following schemes, whichever is higher.

	Scheme 1	**Scheme 2**
Quizzes	10%	10%
Midterm exams	60% = 20% + 20% + 20% (all 3 exams)	40% = 20% + 20% (best 2 of 3 exams)
Final exams	30%	50%

Honor Code

All students are expected to abide by the student honor code: *http://www.honor.gatech.edu*

Calendar and Tentative Syllabus

August 22 *First day of class*	*23* *5.1 Induction*	*24*	*25* *5.2 Recursive sequences*	*26*
29	*30* *5.3 Recurrence relations*	*31* *Quiz*	*Sep 01* *5.4 Recurrence relations*	*2*
5 *Labor Day*	6 *8.1 Algorithms*	*7* *Quiz*	*8* *8.2 Complexity*	*9*
12	*13* *6.1-6.2 Counting*	*14* ***First Midterm***	*15* *6.3 Counting*	*16*
19	*20* *7.1 Permutations*	*21* *Quiz*	*22* *7.2 Combinations*	*23*
26	*27* *7.3 Probability*	*28* *Quiz*	*29* *7.4 Probability*	*30*
Oct 03	*4* *7.5-7.6 Repetition, derangements*	*5* *Quiz*	*6* *7.7 Binomial theorem*	*7*
10	*11* *9.1-9.2 Graphs*	*12* ***Second Midterm***	*13* *9.3 Graph isomorphism*	*14* *Last day to drop with W* *Last day to elect pass/fail*
17 *Fall Break*	*18* *Fall Break*	*19* *Fall Break*	*20* *10.1-2 Euler/Hamilton cycles*	*21*
24	*25* *10.4 Shortest paths*	*26* *Quiz*	*27* *12.1-2 Trees*	*28*
31	*Nov 1* *12.1-2 Trees*	*2* *Quiz*	*3* *12.3 Minimal spanning trees*	*4*
7	*8* *13.1 Planar graphs*	*9* *Quiz*	*10* *13.2 Coloring graphs*	*11*
14	*15* *2.1 Echelon form*	*16* ***Third Midterm***	*17* *2.2 Solving linear systems*	*18*
21	*22* *7.1 Eigenvalues/vectors*	*23* *Quiz*	*24* *Thanksgiving Break*	*25* *Thanksgiving Break*
28	*29* *7.2 Diagonalization*	*30* *Quiz*	*Dec 01* *II.1-2 Linear programming*	*2*
5	*6* *II.3 Simplex method*	*7* *Quiz*	*8* *II.4 Linear programming*	*9* *Last day of class*
12	*13* ***Final Exam*** ***11:30-2:20***	*14*	*15*	*16*

All dates are subject to change. Any changes will be announced in class and on the course web site.

No makeup exams or quizzes will be given.

Mathematics 2602: Linear and Discrete Mathematics

Section L, Spring 2012, Georgia Institute of Technology

http://www.math.gatech.edu/~margalit/classes/math2602

Professor

Prof. Margalit, Skiles 221, *margalit@math.gatech.edu*, (404) 894-2715.

Class Meetings

Lectures are Tuesdays and Thursdays, from 3:05 until 4:25 pm in Clough Commons 152.

Required Text

Linear and Discrete Mathematics, Special edition for the Georgia Institute of Technology.

Office Hours

Tuesday 10-11:00, Wednesday 1-2:00, and by appointment.

Clickers

This course will feature a clicker component (Turning Point). Students will be graded on participation.

Homework and Quizzes

Homework will be assigned on the course web site. It will not be collected or graded. Quizzes will be given in section and will consist of problems similar to homework problems. The lowest quiz score will be dropped.

Sections

	CRN	Classroom	TA	Email	Office	Office Hour
L1	20890	Skiles 270	Robert Krone	rkrone@math.gatech.edu	Skiles 147	Wed 2-3
L2	20879	Skiles 170	Chun-Hung Liu	cliu87@math.gatech.edu	Skiles 146A	Wed 4-5
L3	23240	Skiles 271	Jamie Conway	conway@math.gatech.edu	Skiles 146B	Wed 2-3

Sections are held on Mondays and Wednesdays from 3:05 to 3:55 in the classroom listed above. You must go to your assigned section.

Grading

Clickers 5%, Quizzes 10%, Best two Midterms 20% each, Final Exam 45%. There will be no makeups.

Honor Code

All students are expected to abide by the student honor code: *http://www.honor.gatech.edu*

Calendar and Syllabus

January 9 *First day of class (section)*	*10* *5.1 Induction*	*11* *Quiz 0 (extra credit)*	*12* *5.2 Recursive sequences*	*13* *Last day to drop without a W*
16 *Martin Luther King Holiday*	*17* *5.3 Recurrence relations*	*18* *Quiz 1*	*19* *5.4 Recurrence relations*	*20*
23 *Labor Day*	*24* *8.1 Algorithms*	*25* *Quiz 2*	*26* *8.2 Complexity*	*27*
30	*31* *6.1-6.3 Counting*	*February 1*	*2* ***First Midterm***	*3*
6	*7* *7.1 Permutations*	*8* *Quiz 3*	*9* *7.2 Combinations*	*10*
13	*14* *7.3 Probability*	*15* *Quiz 4*	*16* *7.4 Probability*	*17*
20	*21* *7.5-7.6 Repetition, derangements*	*22* *Quiz 5*	*23* *7.7 Binomial theorem*	*24*
27	*28* *9.1-9.3 Graphs*	*29*	*March 1* ***Second Midterm***	*2* *Last day to drop with W* *Last day to elect pass/fail*
5	*6* *10.1-2 Euler/Hamilton cycles*	*7* *Quiz 6*	*8* *10.4 Shortest paths*	*9*
12	*13* *12.1-2 Trees*	*14* *Quiz 7*	*15* *12.3 Minimal spanning trees*	*16*
19 *Spring Break*	*20* *Spring Break*	*21* *Spring Break*	*22* *Spring Break*	*23* *Spring Break*
26	*27* *13.1 Planar graphs*	*28* *Quiz 8*	*29* *13.2 Coloring graphs*	*30*
Apr 02	*3* *2.1-2 Solving linear systems*	*4*	*5* ***Third Midterm***	*6*
9	*10* *7.1 Eigenvalues/vectors*	*11* *Quiz 9*	*12* *7.2 Diagonalization*	*13*
16	*17* *7.2 Diagonalization*	*18* *Quiz 10*	*19* *II.1-2 Linear programming*	*20*
23	*24* *II.3 Simplex method*	*25*	*26* *II.3 Simplex method*	*27* *Last day of class*
30	*May 1*	*2*	*3* ***Final Exam*** ***11:30-2:20***	*4*

All dates are subject to change. Any changes will be announced in class and on the course web site.