MAT 545   Syllabus   Fall 2016

Time & Place:
Monday, Wednesday & Friday, 9:30am - 10:25am; Room 200 Carnegie

Description: Combinatorics is one branch of mathematics which has many applications in the "real world." It is a problem oriented subject. Both of these facts are reflected in the design of the course. Two of the most important topics within combinatorics are Graph Theory and the Theory of Enumeration. Graph Theory is the study of abstract incidence relations and Enumeration is the study of counting techniques. The course is divided evenly between these two topics.

Text: *Applied Combinatorics 6th Ed.* by Alan Tucker. We will cover most of each of the chapters 1 through 8 of the text. Exactly which sections will be omitted will be decided as the course progresses.

Instructor: Professor Jack E. Graver
     Office: 300C Carnegie
     Office hours: Monday 2:00pm to 3:30pm,
                 Thursday 9:30am to 11:30am
     Email: jegraver@syr.edu,   Extension: 1576.

Grading: There will a problem set collected for each chapter, a test on each part and a comprehensive (open book) final exam. These items will be weighted as follows:

8 Problem sets	(5% each)	40%
2 Tests	(20% each)	40%
Final Exam		20%

Final Grades: The assignment of the final letter grades will be based on the standard scale:

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

Tentative Schedule: Test #1, Oct. 14, will cover topics from Chapters 1, 2, 3 & 4.   Test #2, Dec. 9, will cover Chapters 5, 6, 7 & 8.

Final Exam is scheduled for Friday Dec. 16, 3:00pm to 5:00pm. Every student is expected to take the final exam at that time!

Tentative Calendar

	Monday		Wednesday		Friday	
Aug.	29	§1.1 − 1.2	31	§1.3	02	§1.4
Sept.	05	no class	07	§1.4	09	§2.1
	12	§2.2	14	§2.3	16	§2.3 − 2.4
	19	§2.4	21	§3.1	23	§3.2
	26	§3.3	28	§3.4	32	§3.5
Oct.	03	§4.1	07	§4.2	07	§4.3
	10	§4.4	12	Review	14	test#1
	17	§5.1	19	§5.2	21	§5.3
	24	§5.4	26	§5.5	28	§6.1
	31	§6.2	04	§6.3	06	§6.5
Nov.	07	§7.1	09	§7.2	11	§7.3
	14	§7.4	16	§7.5	18	§7.6
	21	no class	23	no class	25	no class
	28	§8.1	30	§8.2	02	§8.3
Dec.	05	§8.4	07	Review	09	test#2

FINAL EXAM
*Friday, Dec.*16
3:00pm *to* 5:00pm

MAT 545 LEARNING OUTCOMES:

- Ability to use and understand the usage of mathematical notation;

- Ability to follow proofs and other mathematical discourse;

- Ability to write simple proofs in the major proof formats (direct, indirect, inductive), and to engage in mathematical discourse;

- Ability to select an appropriate mathematical model for a given real world problem;

- Ability to apprehend and enunciate the limitations of conclusions drawn from mathematical models;

- Ability to do calculations with the aid of appropriate hardware and/or software;

College and Department Policy Statements

Getting Help: Your instructor and recitation instructor will be holding regular office hours and will make appointments with students having class conflicts with their scheduled office hours. In addition, the Mathematics Department offers regular math clinics. These will be set up by the second week of the semester and a schedule of the clinics will be posted outside the math office.

Cell Phones: all electronic devices other than the calculator should be turned off and put away during class. Calculators on cell phones are not to be used on tests or quizzes.

Students with Disabilities: If you believe that you need accommodations for a disability, please contact the Office of Disability Services(ODS), located in Room 309 of 804 University Avenue, or call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disability-related accommodations and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since accommodations may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

   Related link: http://disabilityservices.syr.edu

Religious Observances Policy. SU religious observances policy recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to are religious observance provided they notify their instructors before the end of the second week of classes. For fall and spring semesters, an online notification process is available through MySlice (Student Services → Enrollment → My Religious Observances) from the first day of class until the end of the second week of class.

   Related link: http://supolicies.syr.edu/studs/religious_observance.htm

Academic Integrity: Syracuse University sets high standards for academic integrity. Those standards are supported and enforced by students, including those who serve as academic integrity hearing panel members and hearing officers. The presumptive sanction for a first offense is course failure, accompanied by the transcript notation Violation of the Academic Integrity Policy. The standard sanction for a first offense by graduate students is suspension or expulsion. Students should review the Office of Academic Integrity online resource Twenty Questions and Answers About the Syracuse University Academic Integrity Policy and confer with instructors about course-specific citation methods, permitted collaboration (if any), and rules for examinations. The Policy also governs the veracity of signatures on attendance sheets and other verification of participation in class activities. Additional guidance for students can be found in the Office of Academic Integrity resource: What does academic integrity mean?

Related links:

The Academic Integrity Policy:

http://academicintegrity.syr.edu/academic-integrity-policy/

Twenty Questions and Answers about the Academic Integrity Policy:

http://academicintegrity.syr.edu/faculty-resources/

What does academic integrity mean?:

http://academicintegrity.syr.edu/what-does-academic-integrity-mean/