SYLLABUS MAT 646 Combinatorics Spring, 2016

The Class Meetings.

11:00 - 12:20pm Tue., Thur. 100 Carnegie

The Instructor.

Prof. Jack Graver 300C Carnegie Ext: 3-1576 jegraver@syr.edu Office Hours: 2:00 - 3:30pm Tue. and Thur. 10:30 - 11:00pm Fri.

[However, students should feel free to drop in any time.]

The Text. Applied Combinatorics, 6^{th} Ed. by Alan Tucker, Wiley. This text has a good expositions of the basic definitions and results of enumeration theory and a very good collection of problems. It will be supplemented with detailed lecture notes. The book Combinatorics with an Emphasis on the Theory of Graphs by J. E. Graver & M. E. Watkins, Springer-Verlag will be on reserve in the mathematics library.

The Course.

The course is divided into three units: *Enumeration, Design Theory* and Matroid Theory. Problems will be assigned regularly. Students may collaborate with one another on these regularly assigned problems as long as they list their collaborators. At the end of each unit, there will be a test with an in-class part and a take-home part. An optional comprehensive final may be taken by students wishing to improve their final grade.

Learning Outcomes

Students successfully completing this course will have mastered the basic techniques of enumeration theory. They will have an understanding of the fundamentals of design theory. Finally, they will have an appreciation of the history and spectacular growth of matroid theory and a mastery of its fundamentals.

University Required Inclusions

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 Ave. Call (315) 443-4498 for an appointment to discuss your needs and the process for requesting accommodations. ODS is responsible for coordinating disabilityrelated 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. You are also welcome to contact me privately to discuss your academic needs although I cannot arrange for disability-related accommodations. Making arrangements with ODS takes time. Do not wait until just before the first test. For more information: http://disabilityservices.syr.edu

Academic Integrity: The Syracuse University Academic Integrity Policy holds students accountable for the integrity of the work they submit. Students should be familiar with the Policy and know that it is their responsibility to learn about instructor and general academic expectations with regard to proper citation of sources in written work. The policy also governs the integrity of work submitted in exams and assignments as well as the veracity of signatures on attendance sheets and other verifications of participation in class activities. Serious sanctions can result from academic dishonesty of any sort. For more information and the complete policy, see http://academic integrity.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 \rightarrow Enrollment \rightarrow My Religious Observances) from the first day of class until the end of the second week of class.