

Syllabus MAT 545 Fall 2018

Contact Information:

- Terry McConnell
- 317 F Carnegie
- 315-443-1499
- trmcconn@syr.edu

Class: MW 3:45-5:05, 114 Carnegie

Course Description:

MAT 545 Introduction to Combinatorics 3 Y Permutations, combinations, recurrence relations, generating functions, inclusion-exclusion and applications, introductory graph theory. Prereq: MAT 375 or CIS 375 or graduate standing in mathematical sciences.

Textbook: Applied Combinatorics. 6th Ed. *Alan Tucker*. Wiley. ISBN 9780470458389

Course Objectives:

After successfully completing this course, students should be able to:

- Demonstrate facility with the techniques of single and multivariable calculus and linear algebra
- Effectively communicate mathematical ideas orally and in writing
- Make accurate calculations by hand and with technological assistance
- Reproduce essential assumptions, definitions, examples and statements of important theorems
- Describe the logical structure of the standard proof formats, reproduce the underlying ideas of the proofs of basic theorems, and create simple original proofs

Homework: Written homework will be assigned and collected regularly. You will get the greatest benefit from homework by working on your own. If you must use someone else's ideas, you must include an appropriate citation with your work – not to do so is a violation of academic integrity. Do not mine the internet for homework answers. You don't learn mathematics by watching someone else do it any more than you learn to play the violin by going to a concert.

Grading: Your final grade is based on homework (20%), 2 in-class tests (25% each) and a final exam (30%).

Tests:

- Test 1: Wednesday, September 26
- Test 2: Wednesday, October 24

Tests last 1 hour during the regularly scheduled class time and in the normal classroom.

Final Exam: Monday, December 10, 3:00-5:00 pm (place TBA)

Students with Disabilities: If you believe that you need academic adjustments (accommodations) for a disability, please contact the Office of Disability Services (ODS), <http://disabilityservices.syr.edu>, located in Room 309 of 804 University Avenue, or call (315) 443-4498 or TDD: (315) 443-1371 for an appointment to discuss your needs and the process for requesting academic adjustments. ODS is responsible for coordinating disability-related academic adjustments and will issue students with documented Disabilities Accommodation Authorization Letters, as appropriate. Since academic adjustments may require early planning and generally are not provided retroactively, please contact ODS as soon as possible.

Academic Integrity: Syracuse University's Academic Integrity Policy reflects the high value that we, as a university community, place on honesty in academic work. The policy defines our expectations for academic honesty and holds students accountable for the integrity of all work they submit. Students should understand that it is their responsibility to learn about course-specific expectations, as well as about university-wide academic integrity expectations. The policy governs appropriate citation and use of sources, the integrity of work submitted in exams and assignments, and the veracity of signatures on attendance sheets and other verification of participation in class activities. The policy also prohibits students from submitting the same work in more than one class without receiving written authorization in advance from both instructors. Under the policy, students found in violation are subject to grade sanctions determined by the course instructor and non-grade sanctions determined by the School or College where the course is offered as described in the Violation and Sanction Classification Rubric. SU students are required to read an online summary of the University's academic integrity expectations and provide an electronic signature agreeing to abide by them twice a year during pre-term check-in on MySlice. The Violation and Sanction Classification Rubric establishes recommended guidelines for the determination of grade penalties by faculty and instructors, while also giving them discretion to select the grade penalty they believe most suitable, including course failure, regardless of violation level. Any established violation in this course may result in course failure regardless of violation level. For more information and the complete policy, see <http://class.syr.edu/academic-integrity/>

Religious observances policy: Syracuse University's 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 holy days 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 a religious observance provided they notify their instructors no later than 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