



Syllabus

Instructor/Class Info

Instructor	Vince Guingona YR 357 vgingona@towson.edu
Class Times	MW 12:00 PM - 1:50 PM, YR 216
Office Hours	MW 2:00 PM - 3:30 PM (or by appointment)
Exam Dates	Exam 1: Sep 25, 12:00pm - 12:50pm Exam 2: Oct 23, 12:00pm - 12:50pm Exam 3: Nov 20, 12:00pm - 12:50pm
Final Exam	Dec 13, 10:15am - 12:15pm

Course Info

Prerequisites: Math 274 and (Math 263 or Math 267)

Course Description: General counting methods, pigeonhole principle, inclusion-exclusion principle, generating functions, recurrence relations, summation techniques, partitions, permutations and pattern avoidance, Polya's enumeration, asymptotics, select topics from graph theory.

Course Objectives: Applied Combinatorics is a course about understanding various counting techniques and studying discrete mathematical structures. Much like Math 263 or Math 267, this is a "proof based" course, so most of the exams, quizzes, and homework assignments will require you to create mathematical proofs.

Course Materials: The recommended primary source is [A Walk Through Combinatorics, An Introduction to Enumeration and Graph Theory, Foruth Edition](#) by Miklos Bona.

Grading Policy

Your course grade will be determined by your cumulative grade on the weekly homework assignments, the weekly quizzes, the three midterm exams, and the final exam. The homework assignments are

worth 10%, the quizzes are worth 20%, each midterm exam is worth 15%, and your final exam is worth 25%. This information is summarized below:

Graded Component	Homework	Quizzes	Exam 1	Exam 2	Exam 3	Final Exam	Total
	10%	20%	15%	15%	15%	25%	100%

The course average will then be used to determine your course grade from the table below.

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

Homework & Quizzes

Written homework assignments will be scheduled approximately once per week and posted on Blackboard. These will typically be due at the beginning of class on Wednesdays. You may work with others on your homework assignments, but each person must submit their own problem set. The assignment due dates are posted on the *Timeline*.

On the days that homework is due, we will have a 15 minute in-class quiz covering the material from the homework. We will have ten written homework assignments over the course of the semester, each worth 1% of your grade, for a total of 10%. We will also have ten quizzes over the course of the semester, each worth 2% of your grade, for a total of 20%.

Other Policies

Attendance: As in all TU classes, regular class attendance is expected. If you are absent from class, it is your responsibility to get any missed information from your classmates. Moreover, it is your responsibility to make a case that any excused absences are *documented*.

It is TU policy to excuse student absences for the following reasons: illness or injury when the student is unable to attend class; religious observance where the nature of the observance prevents the student from attending class; participation in University activities at the request of University authorities; and compelling verifiable circumstances beyond the control of the student. Absences that do not fall in any of these four categories are unexcused. In case of a scheduled excused absence, the student must provide documentation at least one week prior to the date of the absence for it to be excused; otherwise, documentation must be provided as soon as possible.

Make-ups and Late Work: Late written assignments will not be accepted, and no make-up quizzes will be given. In case of a documented excused absence (see above), you will be exempted from that assessment and the respective grade simply will not be a part of your Homework and Quiz record. If you miss an exam due to a documented excused absence, we will work with you to find a reasonable alternative accommodation.

Calculator Policy: Calculators will not be allowed on exams and quizzes.

Help: Please feel free to contact me, or make an appointment, if you have questions or concerns about the class. I strongly encourage you to visit my office hours with your questions.

Academic Integrity: Quizzes and exams are to be completed strictly individually. For written assignments, students should consult only with the class materials, the instructors, or their classmates—but not with any other external sources. Moreover, each student is responsible for writing their own homework solutions independently: "group" solutions are a violation of TU's [Student Academic Integrity Policy](#), to which all students are expected to adhere.

Disability Support Services (DSS): This course is in compliance with Towson University policies for students with disabilities. Students with disabilities are encouraged to register with DSS at:

7720 York Road, Suite 232
410-704-2638 (Voice) or 410-704-4423 (TDD)

Students who expect that they have a disability but do not have documentation are encouraged to contact DSS (see the DSS website) for advice on how to obtain appropriate evaluation. A memo from DSS authorizing your accommodation is needed before any accommodation can be made.

Diversity: In accordance with the Towson University Strategic Plan, the FCSM Diversity Action Plan, and the Department of Mathematics Diversity Action Plan, everyone participating in this course is expected to be respectful of each other without regard to race, class, linguistic background, religion, political beliefs, sex, gender identity or expression, sexual orientation, ethnicity, age, veteran's status, or physical ability. If you feel that these expectations have not been met, please, contact Dr. Elizabeth Goode.