

MA 724: Combinatorics II

Spring 2019

Location:

SAS Hall 1218
TH 1:30–2:45

Instructor:

Ricky Liu
riliu@ncsu.edu
SAS Hall 3264

Office hours:

TW 3–4 or by appointment

Prerequisites:

MA 524

Required textbook:

Ziegler, *Lectures on Polytopes*, 1st edition, Springer, 2012.

Course webpage:

<http://www4.ncsu.edu/~riliu/724>

The course webpage contains useful information about the course, including the syllabus, assignments, and schedule (tentative).

About the course:

Polytopes (V-polytopes and H-polytopes). Fourier-Motzkin elimination, Farkas Lemma, face numbers of polytopes, graphs of polytopes, linear programming for geometers, Balinski's Theorem, Steinitz' Theorem, Schlegel diagrams, polyhedral complexes, shellability, and face rings.

Grading:

Grades will be based on homework (50%), one midterm (20%), and a final exam (30%).

Homework:

Homework will be assigned roughly weekly, due at the beginning of class. Homework will not be accepted through email without prior approval. Late assignments will not be accepted. Collaboration is encouraged, but you are expected to write up your own solutions.

Exams:

There will be one midterm held in class on Tuesday, February 26. The final exam will be held on Tuesday, April 30 at 1–4 pm in the same classroom.

Attendance:

Students are expected to attend every course meeting. No accommodations for missed assignments or exams will be made except as described by NC State regulations at <http://policies.ncsu.edu/regulation/reg-02-20-03>.

Academic integrity:

Students are expected to follow the ethical standards described by the Code of Student Conduct policy and Pack Pledge at <http://policies.ncsu.edu/policy/pol-11-35-01> with respect to completion of homework assignments and exams.

Statement for students with disabilities:

Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with the Disability Services Office at Suite 2221, Student Health Center, Campus Box 7509, 919-515-7653. For more information on NC State's policy on working with students with disabilities, please see the Academic Accommodations for Students with Disabilities Regulation at <http://policies.ncsu.edu/regulation/reg-02-20-01>.

N.C. State Policies, Regulations, and Rules (PRR):

Students are responsible for reviewing the NC State University PRR's located at <http://oucc.ncsu.edu/course-rights-and-responsibilities> which pertains to their course rights and responsibilities.