

COURSE SYLLABUS - SPRING 2018

MATH 608
EXTREMAL GRAPH THEORY
(3 credits)

Time: 12:40pm-2:00pm TR, Carver 0282

Instructor: Bernard Lidický, 422 Carver Hall, lidicky@iastate.edu

Web page: <http://orion.math.iastate.edu/lidicky/608/>

Office hours: 12:00pm–1:00pm MW and by appointment

Brief description of goals and objectives: As the title suggest, the main topic of the class will be extremal graph theory. We will cover topics including Turán type problems, Szemerédi regularity lemma, and probabilistic method. The content may vary depending on experience and interest of students attending the class.

Prerequisites:

Official: MATH 607.

Suggested: Knowledge of graph theory, combinatorial counting and discrete probability are expected and will not be reviewed in class.

Textbook:

Some notes will be provided, there is no official textbook for the class. There are some lecture notes written by Ryan Martin.

Classroom style: The classes will be often done by working through worksheets. The worksheets will also serve as notes.

Study habits: This course does require considerable work. You should be devoting time to reading the notes, thinking about the proofs, ideas, concepts, and techniques, talking with some of your classmates about them, doing all the assigned homework problems. Regular attendance and participation in class activities are the prerequisites for success.

Online resources: The class has a webpage <http://orion.math.iastate.edu/lidicky/608/> and may have a page in Canvas if the instructor manages to put it together. The

webpage contains basic information about the class and class log, which serves as a tentative schedule of the course as well as list of what was done in class.

Homework assignments: There will be homework assignments. Your work on any assignments should be well-presented in good English, and not written carelessly. While you can discuss the assignments with classmates, the work you hand in should be your own write-up and not copied from someone else. The homework assignments will be 60% of your final grade.

Exams: There will be a final exam worth 40% of your final grade.

Classroom etiquette: Communication devices must remain switched off during the class periods. Laptops, iPads or phones during the class are allowed only for textbook reading, taking notes and when instructor assigns work that require the use of laptop.

Attendance: Although attendance will not be taken, it is mandatory. Office hours are for those of you who need additional help beyond that given in the class; they are not substitutes for class.

Academic dishonesty: The class will follow Iowa State University's policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office. <http://www.dso.iastate.edu/ja/academic/misconduct.html> Note that if I catch somebody cheating, I have to report it.

Disability accommodation: Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact instructor to set up a meeting within the first two weeks of the semester or as soon as you become aware of your need. Before meeting with the instructor, you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-7220 or email disabilityresources@iastate.edu. Retroactive requests for accommodations will not be honored.

Dead week: There will be a homework assignment due Thursday of the dead week.