Instructors:

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Texts:


Course Summary: This course is an introduction to enumerative combinatorics and graph theory. This course is intended to provide the student with the ability to solve common classes of combinatorial problems and to articulate these solutions through clear and coherent proof writing techniques. A tentative list of topics to be covered (time permitting) includes the four counting principles, permutations and combinations, the pigeonhole principle, binomial coefficients, the inclusion-exclusion principle, generating functions, introductory graph theory, graph coloring, graph connectivity, and networks.

Examinations: There will be two exams during the semester: a midterm on July 3 and a final exam on August 2. These will be administered during your regular lecture time. Exams will be closed book, but you will be permitted one 8.5” x 11” sheet of handwritten notes.

Missed Exams: If you expect to miss the midterm exam for a legitimate and verifiable reason (illness or hospitalization, for example), please notify your instructor as soon as possible. If your absence is deemed excusable by your instructor, then a makeup midterm may be provided. If your instructor does not deem your absence excusable, then you will receive a zero as the score for your midterm exam.

In order for a student to receive a grade of A, B, C, or D, the student must take the final exam. A grade of incomplete may be given to a student who has missed the final exam or a large portion of the course, if verifiable circumstances warrant it. It is your responsibility to discuss your situation with your instructor in a timely manner should such a situation arise.

Homework: Homework will be assigned on a weekly basis. Problems to be handed in will be posted on Canvas. These written assignments will be due on Mondays at 5:00 PM and are to be turned in to the appropriate box outside of the mathematics department office in Cardwell Hall. Write your name, your instructors name, the class number (Math 510), and the homework number on top of the first page for each assignment. If you choose to write your homework on notebook paper please remove any fringes. Put the problems in the order they were assigned. Staple multiple pages together. **No late homework will be accepted except in cases of personal emergencies.** If you are unable to turn any assignment in due to a foreseeable conflict, notify the instructor as soon as possible to make appropriate accommodations.

Homework help: The mathematics department offers help sessions each semester which are located in Cardwell 41. A schedule of the hours of operation can be found here. Additional information on help for mathematics courses can be found here.

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1The first half of this course will be taught by Phillip Bressie. Beginning the week following the midterm the course will be taught by Carrie Frizzell, who will also administer the final exam.

2Errata
Grading: The student’s final grade will be determined as follows:

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>50%</td>
</tr>
<tr>
<td>Exams</td>
<td>$2 \times 25% = 50%$</td>
</tr>
</tbody>
</table>

Holiday: There will be no classes, help sessions, or office hours on July 4th.

K-State Honor Code, etc.:

Statement Regarding Academic Honesty: Kansas State University has an Honor and Integrity System based on personal integrity, which is presumed to be sufficient assurance that, in academic matters, one’s work is performed honestly and without unauthorized assistance. Undergraduate and graduate students, by registration, acknowledge the jurisdiction of the Honor and Integrity System. The policies and procedures of the Honor and Integrity System apply to full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, and via distance learning. The Honor and Integrity System website can be reached via the following URL: www.k-state.edu/honor. A component vital to the Honor and Integrity System is the inclusion of the Honor Pledge which applies to all assignments, examinations, or other course work undertaken by students. The Honor Pledge is implied, whether or not it is stated: "On my honor, as a student, I have neither given nor received unauthorized aid on this academic work.” A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.

Statement Regarding Students with Disabilities: Students with disabilities who need classroom accommodations, access to technology, or information about emergency building/campus evacuation processes should contact the Student Access Center and/or their instructor. Services are available to students with a wide range of disabilities including, but not limited to, physical disabilities, medical conditions, learning disabilities, attention deficit disorder, depression, and anxiety. If you are a student enrolled in campus/online courses through the Manhattan or Olathe campuses, contact the Student Access Center at accesscenter@k-state.edu, 785-532-6441; for K-State Polytechnic campus, contact Academic and Student Services at polytechnicadvising@ksu.edu or call 785-826-2974.

Statement Defining Expectations for Classroom Conduct: All student activities in the University, including this course, are governed by the Student Judicial Conduct Code as outlined in the Student Governing Association By Laws, Article V, Section 3, number 2. Students who engage in behavior that disrupts the learning environment may be asked to leave the class.

Academic Freedom Statement: Kansas State University is a community of students, faculty, and staff who work together to discover new knowledge, create new ideas, and share the results of their scholarly inquiry with the wider public. Although new ideas or research results may be controversial or challenge established views, the health and growth of any society require a frank intellectual exchange. Academic freedom protects this type of free exchange and is thus essential to any university’s mission.

Moreover, academic freedom supports collaborative work in the pursuit of truth and the dissemination of knowledge in an environment of inquiry, respectful debate, and professionalism. Academic freedom is not limited to the classroom or to scientific and scholarly research but extends to the life of the university as well as to larger social and political questions. It is the right and responsibility of the university community to engage with such issues.

Campus Safety Statement: Kansas State University is committed to providing a safe teaching and learning environment for student and faculty members. In order to enhance your safety in the unlikely case of a campus emergency make sure that you know where and how to quickly exit your classroom and how to follow any emergency directives. To view additional campus emergency information go to the University’s main page, www.k-state.edu, and click on the Emergency Information button, located at the bottom of the page.