Syllabus for MA 340, Combinatorics (Fall 2015)

Instructor: Qinghong Zhang
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Class Time: 9:00-9:50, MTWR
Office Hours: 10:00-12:00 MTWR, and by appointment.

Upon successful completion of this course, a student should be able to:

- apply the properties of binomial coefficients and multinomial coefficients to prove arithmetic identities
- select and correctly apply specialized counting techniques, including Sum Rule, Product Rule, Pigeonhole principles, the Principle of Inclusion and Exclusion, the technique using Generating Functions, and Polya's Theory of Counting
- describe the definitions of basic Graph Theory concepts, including trees, circuits, paths and cycles, etc.
- compute chromatic polynomials for graphs

Evaluation of these learning outcomes will be done through assignments, projects, quizzes, and exams.

Prerequisite: CS 120 and MA 211

Textbook: Combinatorics and Graph Theory, 2nd edition by John M. Harris, Jeffry L. Hirst, and Michael J. Mossinghoff,

Attendance: Students are expected to attend all the classes. Attendance will be taken at the beginning of the class.

Homework, Project, Quizzes and Tests: Homework set will be assigned, collected, and graded each week. I will drop the 2 lowest homework scores. There is a course project that is due before the final exam week. There will be three tests tentatively scheduled for 09/24/15, 10/22/15, and 11/19/15, and a two-hour final exam during the final exam week. The lowest test score will be dropped. Each test counts 15% toward the final grade. The final exam counts 25%. The course project counts 15%. Homework will be 20% toward the final grade. Class participation and presentations will be the remaining 10%. It is important to take the tests and exam at the scheduled time. Generally, no make-ups will be given.

Grading: 90%—100% is an A. 80%—89% is a B, etc.

Disability Services If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Dean of Students Office at 2001 C. B. Hedgcock Building (227-1700 or disserv@nmu.edu). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.

Testing Room Policy for Students:

1. Testing room hours are strictly **Monday-Friday from 8:00 am - 12:00 pm and 1:00 pm - 5:00 pm.** Your exams will be taken away at 12:00 pm and 5:00 pm, whether you are finished or not. If there is a 2 hour time limit, you need to come at least 2 hours prior to closing for lunch and/or the day. Exams will not be given to you if you come later than that.
2. The testing room is for **make-up exams only**. You must have a legitimate reason as to why you cannot make the regularly scheduled exam.
3. Students with disabilities should work with the instructor and Disability Services to arrange for taking exams.