Math 869, Spring 2014: Topology

Lecture: MWF 11:30-12:20 in A–228 Wells Hall (WH).

Instructor: Prof. Effie Kalfagianni, D–323 WH.
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Office hours: By appointment.

Description: This course is the Topology part of the qualifying sequence of Math 868-869: Geometry/Topology. The topics to be covered will be selected from: Fundamental group and covering spaces, van Kampen's theorem, Homology and Cohomology theory, Homotopy theory.

Textbook: The topics to be covered will be selected from A. Hatcher's book "Algebraic Topology". For information about the book, the publisher and how to obtain a copy visit the author's web page in Cornell:

    http://www.math.cornell.edu/∼ hatcher/AT/ATpage.html.

Other books: Additional books you might find useful.

• A. Hather, "Notes on Introductory Point-Set Topology", available at http://www.math.cornell.edu/ hatcher/Top/Topdownloads.html.

• Munkres, James R. "Topology: a first course". Prentice-Hall, Inc., Englewood Cliffs, N.J., .

• Munkres, James R. "Elements of algebraic topology". Addison-Wesley Publishing Company, Menlo Park, CA, 1984. ix+454 pp.

• Massey, William S. " A basic course in algebraic topology." Graduate Texts in Mathematics, 127. Springer-Verlag, New York, 1991. xvi+428 pp.

• Spanier, Edwin H. " Algebraic topology. " Corrected reprint. Springer-Verlag, New York-Berlin, 1981. xvi+528 pp.

• Greenberg, Marvin J.; Harper, John R. Algebraic topology. A first course. Mathematics Lecture Note Series, 58. Benjamin/Cummings Publishing Co., Inc., Advanced Book Program, Reading, Mass., 1981. xi+311 pp

• Davis, James F.; Kirk, Paul "Lecture notes in algebraic topology." Graduate Studies in Mathematics, 35. American Mathematical Society, Providence, RI, 2001. xvi+367 pp. ISBN: 0-8218-2160-1

Assignments/presentations: There will be homework assignments (approximately every 3 weeks.) The usual time for assignment completion will be a week. *Late homework will not be accepted.* You are encouraged to discuss the assignment problems with each other. However *write-ups you turn in must be your own work.*

Exams: There will be a "take home" final exam. The details and dates will be announced later in the semester.

869 Graduate student seminar: The seminar meets once a week; students attending Math 869 lecture on topics that apply and clarify the material covered in lectures. The topics will be chosen by me or suggested by the students. The person organizing the seminar this term is **Vafaee, Faramarz** (Ferry) (Office: C544 WH). The location and time of the seminar will announced soon.

Grading scheme/Determination of final grade: Your final grade will be based on the scores of your written assignments and seminar participation (70%) and your final exam score (30%).

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