

Syllabus, Math 432/532 Winter, 2006

Instructor: Richard Koch
Office: 108A Deady
Office Hours: Monday 10:00 - 11:00, Tuesday 1:00 - 3:00, Friday 9:30 - 11:00
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Book: **A First Course in Algebraic Topology** by Czes Kosniowski
This is available as a zeroxed packet at the UO bookstore.

Approximate outline:

Jan 9 - 13: Group Theory; Homotopy
Jan 16 - 20: Martin Luther King Day; Multiplication of Paths
Jan 23 - 27 : Fundamental Group, Calculation of $\pi_1(S^1)$
Jan 30 - Feb 3: Covering Spaces, π_1 (Covering Space)
Feb 6 - Feb 10: Borsuk-Ulam Theorem; Midterm
Feb 13 - 17: Lifting Theorems; Existence of Covering Spaces
Feb 20 - 24: Seifert-Van Kampen Theorem — Generators
Feb 27 - March 3: Seifert-Van Kampen Theorem — Relations; Calculations
March 6 - 10: π_1 (Surface); Applications to Group Theory; the Spinor Group
March 13 - 17: Compact 3-Manifolds with Finite Fundamental Group;
Introduction to Homology

Grading: Homework 40%
Midterm 20%
Final: 40%

Remarks: The midterm will be on Friday, February 10. The final is on Thursday, March 23, at 10:15.

Homework is due each Friday. I encourage you to discuss problems with each other as well.