

Alexander Dranishnikov (<http://people.clas.ufl.edu/dranish/>)
Department of Mathematics

Intro Topology–2

MTG4303/MTG5317 Topology

Text:

"Topology" by James Munkres.

Schedule and Room:

MWF 6 LIT 201

Grading:

20%P+30%MT+50%Final; A if >85, B+ if > 80, B if > 70, C+ if > 65, C if > 50.

One Presentation, one in class Midterm based on the Homeworks, and hometaken Final; no make-ups.

Extra credit: up to 10 pts for an extra presentation in class, up to 5 pts for solving a * rated homework problem.

Attendance is strictly recommended.

Office Hours:

MW7 LIT 464

Description of the Course:

Fall-2016 Chapters I-IV

Weeks 1-2: Set theory: Sets, functions, index sets, Cartesian products, finite and infinite sets, cardinality, Cantor-Schroeder-Bernstein Theorem, Axiom of Choice.

Weeks 3-8: Topological and Metric Spaces: Definitions and examples of topology, basis, the subspace topology, separable spaces, continuous functions, interior, boundary, closure, product spaces, quotient spaces, metric spaces, function spaces, complete metric spaces, Baire Category Theorem.

Weeks 9-10: Connectedness: Connectedness in the real line, path-connectedness, components, local connectivity.

Weeks 11-15: Compactness: Covers, finite intersection property, compactness in the real line and in Euclidean spaces, Ascoli's Theorem.

Spring-2017 Chapters V-IX

Weeks 1-2: Compactness of products (Tychonoff Theorem). Baire category theorem (now for compact spaces).

Weeks 3-7: Continuous functions and homeomorphisms: Urysohn's Lemma, Urysohn's Embedding Theorem, Tietze Extension Theorem, Stone-Cech Compactification.

Weeks 8-12: Homotopy Theory: Groups, homotopic paths, the fundamental group, covering spaces, applications, Van Kampen Theorem.

- Homework and Extra Credit (<http://people.clas.ufl.edu/dranish/files/set1T.pdf>)
- Solutions to the PQ1 (<http://people.clas.ufl.edu/dranish/files/pSol.pdf>)
- Solutions to the M1 (<http://people.clas.ufl.edu/dranish/files/m.pdf>)
- Solutions to the Final (<http://people.clas.ufl.edu/dranish/files/f.pdf>)
- FINAL (<http://people.clas.ufl.edu/dranish/files/finalF1.pdf>)

· Announcements:

Current Standing:

- Section (<http://people.clas.ufl.edu/dranish/files/resultsT1.pdf>)4623
- Section (<http://people.clas.ufl.edu/dranish/files/resultsT2.pdf>)6171

Statement:

· *Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.*



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