University of Florida

Alexander Dranishnikov
Department of Mathematics

College *of* Liberal Arts *and* Sciences

Home

Courses

MAT6932 Seminar in Topology

Publications

Links of Interest

Curriculum Vitae

MTG4302/5316 TOPOLOGY

MTG4302/5316 TOPOLOGY

MTG4302/MTG5316 Topology

Text:

"Topology" second edition by James Munkres.

Schedule and Room:

MWF 6 LIT 223

Grading:

30%HWQuizzes+30%MT+40%Final; A if >85, B+ if > 80, B if > 70, C+ if > 65, C if > 50.

Three quizzes and one in class Midterm based on the Homework; the home-taken Final; no make-ups.

Home work is not graded. Quizzes consist of homework problems.

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

Attendance is strictly recommended.

Office Hours:

MW7 LIT 424

Description of the Course:

Fall-2022:

- Set Theory, algebra of set operations, functions, relations (§1-5)
- Cardinality (§6,§7)
- Axiom of Choice and Zorn's Lemma (§9, §11)
- Topological spaces, products, basis, metrics, quotients (§12-22)
- Connectedness, path connectedness, local propeties (§25-25)
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Compactness, limit point and sequential compactness (§26-28)

- Local compactness. One point compactification (§29)
- Countability and separation axioms (§30-32)
- Complete metric spaces, spaces of functions with the uniform and sup topologies (§43)
- Baire spaces and the Baire Category Theorem (§48)

Spring-2023:

- Urysohn Lemma and Tietze Extension Theorem (33, 35)
- Tychonoff Theorem (37)
- Stone-Čech compactification (38)
- Path homotopy and the fundamental group (51, 52)
- Covering spaces (introduction) and the Fundamental group of the circle (53, 54)
- Retractions, fixed points, and the Borsuk-Ulam Theorem (55, 57)
- Deformation retract and homotopy (58)
- Fundamental group of spheres (59)
- Fundamental group of some surfaces
- Identification spaces and quotient topology (22)
- Algebraic preliminaries to SVK theorem (67-69)
- The SVK- push out, classical and generator/relation versions (70)
- Fundamental group of wedge of circles, the torus, the dunce cap, the projective plane (71, 73, 74)
- Abelianization of fundamental group (first Homology) (75)

· Homework and Extra Credit
· Solutions to the Q1
· Solutions to the MT
· Solutions to the Final
· FINAL

· Announcements:

Quiz 1 on 09.09.22

Quiz 2 on 10.14.22

MT on 11.02.22

Quiz 3 on 11.30.22

Final due 12.07.22, 12:50 pm

Current Standing:

- Section 3279
- Section 3280

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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