SM464 Topology
Syllabus

Fall AY2013

Text: "Topology and its applications" by William F. Basener

Section	Topic	Problems
0.1	Sets	0.1-0.3
0.2	Cardinality	0.4-0.8
1.1	Continuity and $\mathbb{R}^n$	1.2-1.4
1.2	What is a topology?	1.5-1.12
1.3	Metrics, products, and quotients	1.13-1.15, 1.19-1.28
1.4	Properties of topologies	1.29-1.36
1.5	Homeomorphism	1.38-1.44
1.6	Surfaces	1.47-1.49
2.1	Closed and Bounded	2.1
2.2	Compact Spaces	2.3, 2.7-2.11
2.3	Quotient Spaces are Compact?	2.15-2.22
2.4	Connectedness	2.26,2.27,2.30-2.35,2.41
3.1	Manifolds	3.1-3.3, 3.8-3.10
3.2	Simplicial Complexes	3.12-3.16
3.3	Classification of Surfaces	3.20
3.4	Euler characteristic	3.26,3.29,3.30
4.1	Homotopy	4.1-4.8
4.2	Winding number	4.16,4.18-4.20
4.3	Degrees	4.29
4.4	Brouwer Fixed Point Theorem	4.30
5.1	$\pi_1(X)$	5.1, 5.3, 5.7, 5.8
5.2	Homotopy Equivalence	5.10, 5.11, 5.14, 5.15-5.17, 5.20
5.3	Products	5.23-5.26
5.4	Seifert-Van Kampen	5.29-5.33,5.35

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