

**Math 621: Algebraic Topology**  
**Spring 2021**  
**Lecture Schedule**

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Below is a list of the topics we intend to cover, along with a rough schedule. Actual schedule is subject to change without notice. Last updated April 3, 2021.

Week	Topic
1/20 – 1/22	Overview of Syllabus and Technology Introduction and Roadmap
	<b>Topology</b>
1/25 – 1/29	Topological Spaces Continuity and Compactness
2/1 – 2/5	Simplicial Complexes Cell Complexes
2/8 – 2/12	Homotopy Equivalence (Week 1)
2/12	<i>Rest and Relaxation Day: No Classes</i>
2/15 – 2/19	Homotopy Equivalence (Week 2)
	<b>The Fundamental Group</b>
2/22 – 2/26	The Fundamental Group
3/1 – 3/5	Free Products with Amalgamation The Van-Kampen Theorem
3/8 – 3/12	Covering Spaces The Lifting Lemma
3/8	<i>Rest and Relaxation Day: No Classes</i>
3/15 – 3/19	The Fundamental Theorem of Covering Spaces
	<b>Homology</b>
3/22 – 3/26	Homological Algebra Chain Complexes
3/29 – 4/2	Catch-up Day
3/30	<i>Rest and Relaxation Day: No Classes</i>
3/31	<i>Cesar Chavez Day: No Classes</i>
4/5 – 4/9	Simplicial Homology Singular Homology
4/12 – 4/16	Catch-up Week
4/15	<i>Rest and Relaxation Day: No Classes</i>
4/19 – 4/23	Long Exact Sequences The Snake Lemma
4/26 – 4/30	Equivalence of Singular and Simplicial Homology Cellular Homology
5/3 – 5/6	Excision Mayer-Vietoris
5/7 – 5/13	<b>May 13: Final Project Presentations</b>