

# Fall 2015—Algebraic Topology

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## **1 Some Underlying Geometric Notions**

### **1.1 Homotopy and Homotopy Type**

### **1.2 Operations on Spaces**

### **1.3 The Homotopy Extension Property**

- 2 The Fundamental Group**
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#### **3.1 Simplicial and Singular Homology**

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## 4 Cohomology

### 4.1 Cohomology Groups

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