Atomic Arrangement of Atoms

[Introduction to Structures](https://virginiatech.sharepoint.com/sites/AdaptiveLearning/Shared%20Documents/General/Intro%20Structures.docx?web=1)

[Crystalline Structures](https://virginiatech.sharepoint.com/sites/AdaptiveLearning/Shared%20Documents/General/Crystalline%20Structures.docx?web=1)

Structure can be described at 4 levels (or length scales).

1. Atomic Structure
   1. Bonding
   2. Electron configuration
2. **Atomic Arrangement**
   1. Crystalline Solids
   2. **Semi-Crystalline & Amorphous Solids**
3. Microstructure
   1. Polycrystalline
   2. Crystal structure changes
   3. Compositional changes
4. Macrostructure
   1. Presence of stress concentrators
   2. Overall design

**Lesson Summary (key points) - SLO**

**Lesson Terminology**

**Semi-crystalline**

**Amorphous**

Previous lesson: [Crystalline Structures](https://virginiatech.sharepoint.com/sites/AdaptiveLearning/Shared%20Documents/General/Crystalline%20Structures.docx)

Semi-Crystalline and Non-Crystalline (Amorphous) Solids

 Mostly polymers, ceramic glasses, metallic alloys with high entropy (put this one in a deep dive optional section).