

Outcomes Assessment for Geology 306 (Mineralogy)

| Course Outcomes | Course Objectives (SWBAT) |
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| 1. Understand mineral chemistry. | <ol style="list-style-type: none"> 1. Describe the properties of common ions and how they combine in minerals. 2. Use common terminology and diagrams to describe solid solution in minerals. |
| 2. Understand minerals as periodic crystalline structures and be able to read and communicate about symmetry-related features. | <ol style="list-style-type: none"> 1. Determine and describe the symmetry of well-formed mineral specimens. 2. Read and interpret Miller Indices for crystal forms, and derive Miller Indices for prominent forms on well-formed crystals. |
| 3. Understand the chemical/structural classification system for minerals. | <ol style="list-style-type: none"> 1. Explain the basic structure of each chemical/structural group. 2. Determine the silicate structural group for an unknown silicate mineral formula. |
| 4. Know how to identify and describe minerals in hand specimen and thin section | <ol style="list-style-type: none"> 1. Use mineral references to determine mineral identity based on correct thin section observations in orthoscopic mode. 2. Use mineral references to determine mineral identity based on correct hand specimen observations. 3. Distinguish the most common minerals from each other based upon hand specimen observation, both as single-mineral specimens and as grains in rocks. |