

Assessing achievement in GEO304: Introduction to Geochemistry (Synchronous Remote)

One final exam, consisting of short and long answer responses. 5-6 homework assignments. 3 laboratory exercises based on data sets submitted by the instructors. Students will be provided with the details of sample collection, preparation techniques, utilizing mass spectrometry (in some instances utilizing video), data collection, education and interpretation. One mini project where the students submit samples for analyses and share their findings as a powerpoint presentations with the class. One long (8-12 page) written report based on. Students are encouraged to make corrections and to resubmit for grade improvement. Students are given the opportunity to engage in problem solving in class, collectively and in small groups. Students are given tutorials in EXCEL for use in performing calculations and in graphing so that they have obtained some skill level in manipulating data in a spreadsheet.

Oral assessment: students prepare and present a short powerpoint. Grades includes clarity and content, plus ability to answer questions from instructors and student peers.

Grading: Grading is based on a total point system

Aspects of current program goals in Geochemistry

Applied understanding of low and high temperature geochemical processes, including element and isotope distributions, the geochemical structure of the Earth, radiometric dating, the chemistry of the ocean. Concepts of thermodynamics with an emphasis on the understanding and applicability of equilibrium are included.