Assessing achievement in GEO304: Introduction to Geochemistry

Three exams, consisting of short and long answer responses.  5-6 homework assignments. 3 laboratory exercises, including sample collection, preparation techniques, utilizing mass spectrometry, data collection, education and interpretation. One field trip with associated laboratory work involves submission of a written report of findings, which is returned to the students with comments. 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 on a topic of interest.  Grades includes clarity and content, plus ability to answer questions from instructors and student peers.

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.