

## Introduction To Geochemistry 206-12191

Prof. Jiwchar Ganor

### Syllabus

Measurement and errors in measurement; chemical composition of Earth and the solar system, the early history of Earth and the solar system, meteorites - stony and iron meteorites, rates of cooling. Equilibrium systems. Basic equations of thermodynamics. Condensation processes of the solar system. Principles of radiometric dating; stable isotopes. Fractionation of the core, mantle, crust and atmosphere of Earth. Distribution of major elements between different rock types. Fractionation coefficients and trace elements. Geobarometers and geothermometers. Chemical oceanography and the concept of residence time. Redox processes and Eh/pH diagrams.

### Bibliography (מהאטר)

This course does not have a textbook. Some articles will be assigned during the semester, and will be posted on the course website (highlearn).

### Course Requirements

Prerequisites: Introduction to Dynamic Geology, Introduction to Physical Chemistry 1  
Exercises; readings