

Introduction to Geophysics 206-13041 2.5 credits

Dr. Roi Granot

Syllabus

Classification of igneous rocks, field relations of volcanic and plutonic rocks, igneous textures. Gibbs phase rule and binary phase diagrams. Ternary phase diagrams. Geochemistry of igneous rocks ? major and trace elements and isotopes. Tectonomagmatic settings: mid oceanic ridges, island arcs and hot spots. Classification of metamorphic rocks; metamorphic structures and textures; metamorphic facies and pelitic and basitic assemblages. Deformation and recrystallization during metamorphism. The phase rule in metamorphic systems. Metamorphic reactions and geothermobarometry. Metamorphic fluids and metasomatism.

Bibliography

John D. Winter/ Principles of igneous and metamorphic petrology. Pearson, 2010  
John D. Winter/ .An Introduction to Igneous and Metamorphic Petrology. Prentice-Hall, 2001. Bruce W. Yardley ? An Introduction to Metamorphic Petrology. Longman, 1989.

Course Requirements

Introduction to Dynamic Geology  
Introduction to Computing for the Geoscientists  
Physics 1C

2 hrs lecture  
1 Weekly tutorial hours

Each component must be graded 56 at least.