Principles of Sedimentary Geology 206-12201 – 5.25 credit  
Prof. Chaim Benjamini

Syllabus
1. Sedimentological and stratigraphic data – field, borehole and seismic data and depiction
2. Weathering, transport, and deposition – processes, products and retrieval signatures
3. Terrestrial alluvial/fluvial clastic systems; Aeolian, lacustrine subsystems
4. Coastal clastics – deltaic, peritidal and barrier-dominated
5. Biogenic and bio-catalyzed shallow-water carbonate systems
6. Continental shelf, slope, rise and deep marine sedimentary environments and signatures
7. Burial and diagenesis – Eo-, meso- and telogenesis in clastic and carbonate rocks
8. The organization of sedimentary rock systems: Basin geometry and lithostratigraphy
9. Time and correlation in sedimentary rocks: Biostratigraphy, radiometric dating, magnetostratigraphy, and chronostratigraphy
10. Allostratigraphy: Sea level change, sequence stratigraphy and basin analysis.
11. Chemo- and climate stratigraphy; approaches to the Quaternary
12. Evaporites, dolomite, siliceous and other chemical sediments, and their meaning in geological history

Bibliography:

Course Requirements
Basic first-year courses in geology; paleontology
4 hrs lecture,
2 hrs lab or exercise
1 day excursion.