GEOL 344 Stratigraphy and Sedimentation
Instructor: Sven Egenhoff

Course Description:
• Description, identification and classification of sedimentary rocks and their physical structures; Interpretation of formation mechanisms of sedimentary structures; combining changes in character of sedimentary rock successions into depositional models; introduce basic concepts of stratigraphy and basin formation, and how they apply to understanding sedimentary successions.

Learning Outcome:
• Knowing how sedimentary rocks originate, and the processes that form them
• Understand sediment transport mechanisms and bases of fluid mechanics, and how this relates to forming sediments and sedimentary rocks
• Describe and classify siliciclastic and carbonate sedimentary rocks
• To be able to recognize sedimentary structures in the field and in hand sample, and to be able to reconstruct processes responsible for forming sedimentary structures
• To recognize indicators of erosion and synsedimentary deformation in sedimentary rocks
• To be able to reconstruct depositional environments in ancient rock successions based on indicative sedimentary structures, and recognize changes in environment in the succession of sedimentary rocks
• To know basic stratigraphic rules (rule of superposition, facies reconstruction etc.) and apply them to sedimentary successions
• Know basics of hydrocarbon formation, types of reservoirs, and geological elements necessary for forming hydrocarbons; general approaches to evaluate the hydrocarbon potential of a rock succession
• General aspects of how to classify sedimentary basins