

# **GEOL 366 Sedimentary Petrology and Geochemistry**

Instructor: Sally Sutton

## Course Description:

- Composition, identification, and classification of sedimentary rocks; geochemical processes affecting sedimentary rocks and surficial sedimentary deposits.

## Learning Outcomes: Successful students will learn to

- Recognize, describe, and classify sedimentary rocks in hand sample and thin section.
- Relate the texture, mineralogy, and chemistry of sedimentary rocks to processes of sediment generation, transport, deposition, and diagenesis.
- Apply fundamentals of acid-base and oxidation-reduction reactions to interpretation of processes affecting sedimentary rock formation, alteration, and destruction.
- Graphically represent and understand mineral stabilities in aqueous systems as a function of such variables as pH, Eh, ionic concentrations or ratios, and temperature.
- Interpret secular changes in tectonics, climate, and atmospheric composition, based on the sedimentary rock record.