

Department: MARN

Course No.: 280W

Title: Marine Biogeochemistry

Credits: 3

Contact: Annelie Skoog

WQ: W

Catalog Copy: 280W. Marine Biogeochemistry. First semester. Three credits. Two 1.5-hour lectures. Prerequisite: CHEM 128, MATH 114 or 116, PHYS 122 or equivalents; ENGL 105 or 110 or 111 or 250. Fitzgerald

Composition, origin and solution chemistry of sea water. Marine biogeochemical cycles of water, salt, carbon, nutrients, gases and trace elements. Effects of ocean circulation, biological cycles and crustal exchanges on the distribution and transfer of substances in the marine environment.

W Criteria: 50% of the grade is determined by two in-class examinations, various homework assignments and a Final Examination 50% of the grade is based on a research paper of 4000 words or greater (15-20 typewritten pages). **THE STUDENT CANNOT PASS THE COURSE WITHOUT PASSING THE W COMPONENT.** The marine biogeochemical/chemical oceanographic topic for the paper is determined from consultation and discussions with the instructor. Moreover, the paper is carefully supervised, and the drafts examined and edited during the course of the semester to ensure the development of its scientific content and written expression. The grade for this writing component is based solely on the final version. The research paper format is of the type commonly used for manuscripts published in scientific journals. The geochemical journal, *Geochimica et Cosmochimica Acta*, serves as a model. Copies of this periodical are found in the Geology and Geophysics Department's library (also available electronically). The strict submission schedule for the development and completion of the research paper is as follows:

ACTIVITY **DUE DATE** (on or before)

Topic selection Mid September

Abstract, paper outline
and references First week in October

Draft of complete paper First week in November

Final version First week in December.

