

Department: MARN

Course No.: 275W

Title: Geological Oceanography

Credits: 3

Contact: Annelie Skoog

WQ: W

Catalog Copy: 275W. Geological Oceanography. First semester. Three credits. Prerequisite: One year of laboratory science in CHEM, GEOL, MARN and/or PHYS or consent of instructor; ENGL 105 or 110 or 111 or 250. Torgersen

Basic concepts in geological oceanography, plate tectonics, and the role of ocean floor dynamics in the control of the Earth and ocean system.

W Criteria: This course explores the observations and methodologies of geological oceanography as a means of defining, interpreting and confirming the geologic function of the Earth as series of coupled process. It teaches hypothesis driven inquiry in a realm of science where observation is often not possible and the means to reconstruct what happened from the evidence recorded in the geologic record and oceanic sediments. Because the interpretation of the geologic record and the hypothesis with regard of causal mechanisms requires a detailed knowledge of the observations as well as the implications of both mechanisms and consequences, standard in class exams do not offer the best opportunity for students to explore their rationale and scientific thinking.

This course is designed to develop in students both the scientific knowledge to pose and test hypotheses as well as the specific writing skills necessary to develop and explain the science of geologic oceanography. Four writing assignments are expected over the course of the semester. As per the attached syllabus, writing constitutes 50% of the total grade. **THE STUDENT CANNOT PASS THE COURSE WITHOUT PASSING THE W COMPONENT.**

Each writing assignment is five pages in length (4 assignments x five pages x 250 words per page=5000 words). Student papers are submitted electronically and receive detailed commentary and editing suggestions from the instructor (typically in WORD revision mode). As per the attached syllabus, each paper is given opportunity for one revision with some exceptions for those students qualifying for academic special exemptions. Those drafts falling short of an appropriate word count are instructed to include additional material. Each writing assignment answers a specific question in geologic oceanography and is considered a "take-home- exam question" graded appropriately for both science and writing. (If the writing is not clear the science will not be clear!). The questions for the first two writing assignments are given by the instructor. Students choose from one of several questions. The last two writing assignment are developed between the instructor and the student to accommodate student

specific interests, appropriateness of the topic and suitability of the topic. These writing assignments are then submitted and handled as per the procedure outlined above.