

GG 674 /OCN 674, PALEOCEANOGRAPHY, VARIABLE FALL SEMESTERS

~Sample Syllabus~

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PALEOCEANOGRAPHY is cross-listed between the Departments of Geology and Geophysics and Oceanography. We meet for approximately 3 hours per week (3 credit hours), at 1:30 – ca. 2:45 PM Tuesdays and Thursdays. Readings will be assigned prior to guest lectures and student-led seminar discussions. Students leading discussions are responsible for making sure that a copy of their readings is made available for the other students by posting (1) a PDF *and* (2) placing one hard copy of the paper(s) on reserve one week prior to the discussion. Course grades are based on (1) your student class participation, (2) quality of your own seminar presentations, and (3) the completion of a **Course Journal** that will be due at the end of the semester.

The Course Journal should be a record of the topics covered during the course, as well as those you, in particular, discussed in class; i.e. a one to two paragraph synopsis of the topics and papers discussed and your comments on why it is significant, especially how it relates to other materials covered in this course. Each time you present a discussion of a reading assignment, it is required that you write up your synopsis of the readings and distribute this to each class member at the beginning of the class period during which you give your presentation. Especially pertinent graphics should also be included in each written synopsis. In this way each member of the class will have complete journal covering all topics at the end of the semester. It is essential that you keep your class Journal up-to-date on a regular basis; do not put this off to the end of the semester!

Student participation in the selection of particular topics is highly encouraged!

<u>WEEK</u>	<u>SUGGESTED TOPICS</u>
Aug. 24 (Tue)	Introduction to the course
Aug. 26 (Th)	Lecture (Glenn): Modern Atmospheric and Oceanic Circulation
Aug 31 (Tu)	Lecture (Glenn): Deep Sea Sediment Distributions
Sept. 2 (Th)	Lecture (Glenn): Understanding Global Stratigraphy
Sept. 7 (Tu)	Guest Lecture: Dr. Loren Kronke/Richard Hey: “Plate Movements with Computer Simulations”
Sept. 9 (Th)	Guest Lecture: Dr. Steven Stanley “Paleoceanography and Evolution”
Sept. 14 (Tu)	Guest Lecture: Climate Change
Sept. 16 (Th)	Lecture: Dr. Emilo Herrero-Bervera, “Paleomagnetism and the Rock Record”
Sept. 21 (Tu)	Lecture: Dr. Emilo Herrero-Bervera, “Application of Paleomagnetism in the Study of Marine Sediment Stratigraphy: <u>Lab Visit Included</u> ”
Sept. 23 (Th)	Guest Lecture: Dr. Fred Mackenzie "The Past 300 Years of the Global Carbon Cycle"

Sept. 28 (Tu)	Guest Lecture : Dr. Chip Fletcher: “Quaternary Sea Level Change”
Sept. 30 (Th)	Guest Lecture: Dr. Greg Ravizza: “Paleoceanographic Impacts”
Oct. 5 (Tu)	Lecture (Glenn) “Past Views of Paleoceanographic Change Through Time”
Oct. 7 (Th)	Lecture (Glenn) “Past Views of Paleoceanographic Change Through Time”
Oct. 12 (Tu)	Guest Lecture: Dr. Greg Ravizza “Deconvolving Deep Water and Ice Volume Stable Isotope Paleoceanographic Records: Mg/Ca Paleotemperature Proxies”
Oct. 14 (Th)	Guest Lecture: Dr. Greg Ravizza “Osmium and Sr Isotopes in Paleocenography”
Oct. 19 (Tu)	Student Seminars: Mesozoic Events: Notions of Stinking Oceans
Oct. 21 (Th)	Student Seminars: Mesozoic Events: The K/T Boundary: Big Impact
Oct. 26 (Tu)	Student Seminars: Paleogene Events - 1
Oct. 28 (Th)	Student Seminars: Paleogene Events – 2
Nov. 2 (Tu)	Holiday (Election Day)
Nov. 4 (Th)	Student Seminars: Paleogene-Neogene Oceans and Climate
Nov. 9 (Tu)	Student Seminars: Neogene Events - 1
Nov. 11 (Th)	Holiday Veterans’ Day
Nov. 16 (Tu)	Student Seminars: Neogene Events - 2
Nov. 18 (Th)	Student Seminars: Neogene Events - 3
Nov. 23 (Tu)	Student Seminars: Quaternary Events - 1
Nov. 25 (Th)	HOLIDAY (Thanksgiving Day)
Nov. 30 (Tu)	Student Seminars: Quaternary Events - 2
Dec. 2 (Th)	Student Seminars: Quaternary Events - 3
Dec. 7 (Tu)	Student Seminars: Quaternary Events - 4
Dec. 9 (Th)	Student Seminars: Quaternary Events - 5
Dec. 14 (Tu)	STUDENT JOURNALS DUE (Finals Week)