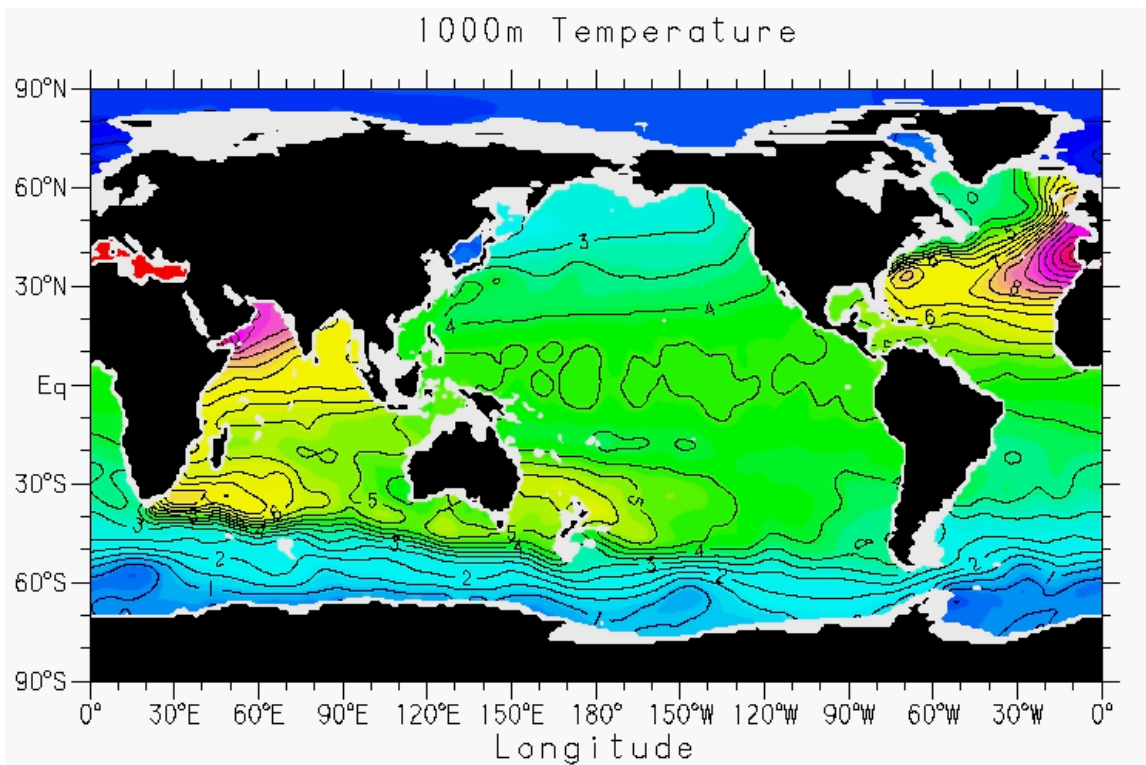


COURSE SYLLABUS
GEL 330
OCEANOGRAPHY
3 SEMESTER CREDIT HOURS
Fall 2007

Professor: Dr. Chris Baldwin
(SHSU Tel: 41593)
(e-mail: baldwin@shsu.edu)



COURSE SYLLABUS

GEL 330 OCEANOGRAPHY

3 Semester Credit Hours

Fall 2007

Room: LDB 319

Classes meet: TuTh 9.30-11am

Professor: Chris Baldwin

Office: LDB 300

Tel: 41593

e-mail: baldwin@shsu.edu

Office Hours: M-days 8am-8.30am and 10am-12am; Tu/Th 11am-12, or by appointment

Course Description

The Earth is a blue planet because, and unlike all the others in our solar system, it contains vast amounts of water - much of it in the liquid form stored in oceans and seas. In this course you will discover a good deal about the physical and chemical properties of water in the oceans, something about the biological processes and products, and you will learn much about the ocean basins themselves (essentially, the "buckets" that contain all this water). Why are individual ocean basins different? Why did the Atlantic Ocean once run over a waterfall into the Mediterranean Sea? What are the biological effects of the Panama Canal, and why should we be concerned about ships with dirty bottoms? We will also consider some of the uses and abuses of oceans that humans inflict upon these important natural systems. And we will investigate some of the implications of the connections between the oceans and the atmosphere, and between human activity and possible global rises in sea level. Find out when and why Huntsville realtors might eventually (?) offer "ocean side" properties just below the SHSU campus!

Prerequisites: GEL 133 or 134 or equivalent Introductory Science course, or instructor approval

Methods: Lectures; Oral Presentations by class

Assessment: Quizzes (2x 10%), Paper (30%), Team-based oral presentation (30%), Final Exam (20%)

Grading:

- Quizzes are multiple choice format. Emphasis will be on terms and defining basic concepts.
- Paper outline and grading is shown below (page 4)
- Oral presentation
- Final Exam is cumulative: two short essays (from a choice of 5) that require an understanding of the connections and linkages of different concepts and models.

Objectives:

- Scientific thinking and analysis
- The origin and evolution of oceanography as a scientific discipline
- The nature of scientific (geological and oceanographic) evidence
 - Linkages and coupling of different natural Earth and ocean systems
 - Physical, Biological, and Chemical processes and products
 - Critical understanding of human interactions with natural systems
- Focus on content area material for teachers

Course text: Trujillo, Thuman *Essentials of Oceanography* Prentice Hall 8th Edn.

Supplies: Colored pens or pencils, Blue Book

Attendance

All lectures are compulsory. Please note that both the final exam and other quizzes and tests will include questions that may make use of a large number of Power Point slides. These slides will only be shown during lectures and many will not be duplicated in the textbook or on Blackboard. If you miss lectures you will place yourself at a considerable disadvantage.

The University requires each instructor to keep a record of student attendance. Attendance based on a seating chart will be recorded at the beginning of the class period. **Tardies count as an absence.** Please do not be late – it disturbs other members of the class.

Nine (9) class hours of absence are allowed without penalty. Absences in excess of nine class hours will result in course failure.

Please note that this class policy will be closely adhered to throughout the semester. It is not to be considered an invitation to skip a fifth of your course. Rather it is an understanding that as adults you have a variety of responsibilities that put pressure on your time. The flexibility of up to nine absences will permit you to manage your affairs so that you can derive the maximum benefit from course lectures.

An absence from a quiz or exam (including for religious reasons - see Religious Holidays, page 6) may be approved, dependent upon the merits of the case, but will only be approved in cases of the utmost emergency such as the death or injury of an *immediate* family member. In such cases the onus is upon the student seeking the absence to show supporting evidence as to the nature of the emergency. A class average grade for the particular quiz or exam will be awarded.

Assignments:

2 Section Quizzes

Quizzes will cover pairs of sections -1 &2, 3 &4 + Geography (format: multiple choice) TOTAL VALUE 20%

Research Paper

Topic: *Global Warming and Sea Level Change*

Your paper must be at least 1500 words but no more than 3000 words and it should contain relevant figures and diagrams and must closely follow the format of articles in the journal *Geology*. You may make use of and quote from no more than 5 web sources. You **MUST** make informed reference to at least two recent scientific journal articles, and to at least one scientific book. Your paper must include fully comprehensive citations and a bibliography that follows the Chicago format (Note: MLA citation format is NOT acceptable.) You may begin your paper at any time. It must be delivered to me at the end of class on Thursday, November 1st.

TOTAL VALUE 30%

Oral Presentation

We will debate a series of environmental topics. The format will be of a pro or con debate with individuals or pairs of students presenting the case for a given side of the issue. The issue will be presented in an oral format with the use of a reasonable number of PowerPoint slides. The presentation may be an amalgamation of the team with a single presenter or a composite presentation with each member of the team making an individual contribution. A log that summarizes the input of each team member to the development of the presentation will form an important part of the assessment. Please note that you will be allocated your topic and your side (pro or con) on the basis of chance. Further detailed instructions will follow later.

Grading for this task will be based on the following: 20% - scientific (including social scientific) content; 10% - style and completeness of presentation.

TOTAL VALUE 30%

You must be prepared to deliver your talk on Thursday, November 29th.

Cumulative Final Exam

Exam will contain short essay questions.

TOTAL VALUE 20%

Due Dates and Timetables

I do not give makeup exams.

Any due assignments handed in after the due time/date and for which there is no **WRITTEN EXTENSION** will be penalized by –10% per day down to zero.

Academic Conduct

University statement: *All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of academic dishonesty including, but not limited to, cheating on examinations or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.*

I assume that a basic honor system applies to this course and that you must take care to respect your fellow students.

You will be completing a scientific paper project that may contain new material created entirely by you. However, it is more likely that you will largely collect, select, and present in a new configuration intellectual materials in the form of text books, journal articles, and web material that was created by others. This published work must be acknowledged in the conventional form of citation linked to a full bibliography. I explicitly assume that you have read and understood the sections on Academic Conduct in the current SHSU Student Handbook and that you particularly are aware of the issues surrounding **plagiarism**. If you are in doubt – ask first. I will pay particular attention to proper citation and referencing of web material.

Classroom Rules and Conduct

University statement: *Students are expected assist in maintaining a classroom environment that is conducive to learning. Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones and pagers must be turned off before class begins. Students are prohibited from eating or drinking in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.*

- Come to class on time—there is no reason to be late to class on a frequent basis. **Habitual tardiness is unacceptable.**
- Remain in class until it finishes. **Leaving early will count as an absence unless you have cleared it with me or unless it is an emergency.**
- **You cannot leave the class during an exam** unless there is a medical emergency.
- **If you arrive after the first person has left an exam or quiz you will not be permitted to take the exam.** (Note: makeup exams are not given).
- During lectures and tests, cell phones and any other equipment capable of receiving, recording and/or transmitting information, must be put away in a book bag or purse. (In short, it must not be readily accessible or accessed during an exam.)

VISITORS IN THE CLASSROOM:

University statement: *Unannounced visitors to the classroom must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom. This policy is not intended to discourage occasional visiting of classes by responsible persons.*

Americans with Disabilities Act:

University statement: *It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request assistance with academically related problems stemming from individual disabilities by contacting the Director of the Counseling Center in the Lee Drain Annex or by calling (936) 294-1720. Any student seeking accommodations should go to the Counseling Center and Services for Students with Disabilities in a timely manner and complete a form that will grant permission to receive special accommodations.*

Religious Holidays:

Students who are absent from class for the observance of a religious holy day are allowed to take an examination or complete an assignment scheduled for that day within reasonable time after the absence. The period of time during which assignments and exams will be excused includes travel time associated with the observance of the religious holy day. A student who wishes to be excused for a religious holy day must present the instructor of each scheduled class that he/she will be absent from class for religious reasons with a written statement concerning the holy day(s) and the travel involved. The instructor should provide the student with a written description of the deadline for the completion of missed exams or assignments. In such cases, the student will be required to take the test or submit the assignment early—unless there are good reasons for not being able to do so and the instructor has agreed to those reasons.

E-Mail Communication

I welcome e-mail from you – it can form an important part of the course, and I will use it to communicate information to you via your listing on Blackboard. However there are a few rules that need to be followed so that we can make the most of electronic communication.

- Format your e-mail as a letter or a memo – that is your e-mail should be addressed to Dr. or Prof. Baldwin (I worked hard on a PhD to get rid of Mr.!!); it should include your class and section # - GEL 330 (01); and it should include your name (not just your e-mail address).
- I will reply to your e-mail as quickly as I can but you should assume that a quick response will only come during the working day (7am-5pm). I always check my e-mail at home during the evening but we are on a phone line that cannot practically handle graphics or bulky attachments which will have to wait until I come into the office at 7am the next day.
- If you request something from me or if you request permission for something DO NOT assume that you sending the request grants you that request. You need to get my reply.

Academic Progress

Check your running score on Blackboard where you will see each graded item listed. Thus, the score shown will show you where you are with respect to your final percentage score.

COURSE OUTLINE

The course is divided into a series of sections that each ties together some aspects(s) of the science of oceanography.

(Chapter in Textbook)

SECTION 1:

INTRODUCTION

(1)

Introduction
Historical context and developments in Oceanography
Technology

SECTION 2:

THE OCEAN BASINS

(2, 3)

"The Bucket" - Plate Tectonics
How ocean basins are made and maintained.
The interactions of the water with the bucket
Some special biological considerations

SECTION 3:

SEDIMENTS AND ENVIRONMENTS

(4, 10, 11)

Shorelines out to deep oceans
HEBBLE Case Study
Coasts, Shorelines and Estuaries – environments, processes, and products

SECTION 4:

THE WATER

(5, 6, 7, 8, 9)

The properties and characteristics of water Thermal properties Solvent properties
Physical Properties
Waves and Tides
Deep Oceanic Circulation

SECTION 5:

BIO-OCEANOGRAPHY

(12, 14, 15)

Energy and Physical factors
Benthic communities Coral reefs
Pelagic Communities

SECTION 6: PROJECTS & PRESENTATIONS