

**SYLLABUS**  
**GEOL 1345 – Introduction to Oceanography**  
**Spring 2018**  
**Class Number 59532**

**Instructor contact information**

Karen Blair Yip [karen.yip@hccs.edu](mailto:karen.yip@hccs.edu)  
Please make use of the Eagle Online email/inbox tool.

**Office Location and Hours**

West Loop Campus Room C221 Mon/Wed 3:30-4:30pm –and– location TBA: Tue/Thur 1-2pm  
Please contact me to let me know you would like to meet at these times or if you would like to meet at another time to better fit your schedule.

**Course Location/Times**

Mon/Wed 2pm – 3:30pm West Loop room C221

**Course Semester Credit Hours (SCH) (lecture, lab)**

Credit Hours 3.00  
Lecture Hours 3.00  
Laboratory Hours 0

**Total Course Contact Hours**

48.00

**Course Length**

16 weeks

**Type of Instruction and method**

Face-to-face Lecture

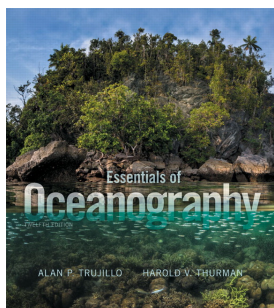
**Course Description:**

An introduction to the world's oceans, emphasizing the geological, physical, biological, chemical, and ecological aspects of the marine environment. Core Curriculum course

**Course Prerequisite(s)**

- Qualify to take INRW 0420 or ESOL 0360 or higher
- Qualify to take MATH 0312 (Intermediate Algebra) or higher

**Textbook Information:** The following textbook is required.



Textbook: *Essentials of Oceanography, 12<sup>th</sup> ed.*, by Trujillo and Thurman; Pearson/Prentice-Hall, 2017 (ISBN 9780134253947)

In addition to bringing your book every day please also bring a notebook, pencils, and a calculator.

**Academic Discipline/CTE Program Learning Outcomes**

1. Students will recognize scientific and quantitative methods.
2. Students will evaluate the differences of scientific approaches and communicate these findings, analyses, and interpretations in oral and written communication.
3. Students will identify and recognize the differences in competing scientific theories.
4. Students will demonstrate knowledge of the major issues and problems facing modern science,

including issues that touch upon ethics, values, religion, and public policies.

5. Students will demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

#### **Course Student Learning Outcomes (SLO):**

1. Understand the origin and distribution of ocean sediments
2. Relate the ocean system to the larger Plate Tectonic model and other dynamic Earth systems.
3. Understand properties of seawater
4. Relate ocean conditions to Earth's climate system.

#### **Learning Objectives**

- 1.1. Summarize the distribution of lithogenous and biogenous sediments on the ocean floor.
- 1.2. Explain how marine sediments reach the ocean floor.
- 1.3. Visualize changes in sediment thickness and composition from the mid-ocean ridges to continental margins.
- 2.1. Describe the four major components of the Earth system.
- 2.2. Explain the differences between ocean crust and continental crust.
- 2.3. Summarize the characteristics of major plate tectonic boundaries.
- 2.4. Explain how ocean basins form.
- 3.1. Calculate the density of seawater from temperature-salinity/density diagrams.
- 3.2. Interpret isothermal and isohaline maps of the global ocean.
- 3.3. Use Argo Float data to relate changes in seawater temperature and salinity with depth.
- 4.1. Compare and contrast neutral conditions in the tropical Pacific Ocean to El Nino and La Nina conditions.
- 4.2. Analyze observational buoy data in the tropical Pacific.

#### **Core Curriculum Objectives**

This course is in the Life and Physical Science Core Curriculum "functional component area" and meets the objectives of:

- **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- **Communication Skills** - to include effective development, interpretation and expression of ideas through written, oral and visual communication
- **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

## Class Schedule **This schedule is subject to change**

Please review the chapter and check Eagle Online for any handouts before coming to class

<b>WEEK</b>	<b>DATE</b>	<b>Assignments and Class Discussion topics</b>	<b>OUTSIDE OF CLASS</b>
week 1	1/17	Introductions, Overview of Course <i>and</i> start oceanography material	Read Chapter 1
week 2	1/22	Chapter 1: Introduction to Planet Earth & start Chap 2.	Read Chapter 1 Take quiz #1
	1/24	Chapter 2: Plate Tectonics and the Ocean Floor <b>In-class exercise 1:</b> Dynamic Ocean floor	Read Chapter 2
week 3	1/29	Finish Chap 2.	Read Chapter 2 Take Quiz #2
	1/31	<b>In-class exercise 2:</b> Marine provinces Chapter 3: Marine Provinces	Read Chap 3 & Take quiz #3
week 4	2/5	Chapter 4: Marine Sediments	Read Chap 4,
	2/7	Continue discussion of sediments and check out some rocks	Take quiz #4
week 5	2/12	Chapter 5: Water and Seawater	
	2/14	<b>In-class exercise 3:</b> salinity & demonstration	Complete quiz #5 prepare for Exam
week 6	2/19	<b>PRESIDENT'S DAY HOLIDAY – no class</b>	prepare for Exam
	2/21	<b>Exam #1 (chap 1-5)</b>	
week 7	2/26	Chapter 6: Air-Sea Interaction	
	2/28	Chapter 7: Ocean Circulation <b>exercise 4:</b> Ocean currents	Quiz #6
week 8	3/5	Chapter 8: Waves and Water Dynamics	
	3/7	<b>In-class exercise 5:</b> Waves	Quiz #7
		<b>SPRING BREAK March 12-16</b>	
week 9	3/19	Chapter 9: Tides	
	3/21	Chapter 10: Beaches, Shoreline Processes and the Coastal Ocean	Complete quiz #8
week 10	3/26	<b>exercise #6</b> shore + tides	Complete quiz #9
	3/28	Chapter 11: Marine Pollution	Quiz #10 prepare for Exam 2
week 11	4/2	Finish up next set of chapters <b>Withdrawal deadline – April 3</b>	
	4/4	<b>EXAM #2</b> (chap 6-11)	
week 12	4/9	Chapter 12: Marine Life and the Environment	Read Chap 12

	4/11	Chapter 13: Biological Productivity and Energy Transfer	Read Chap 13 Quiz #11 *read Climate of Change homework reading & pre-quiz
week 13	4/16	InTeGrate: Climate of Change (read Chap 16: Oceans & Climate Change)	Read Chap 16
	4/18	InTeGrate	Take Quiz #12 (chap 16)
week 14	4/23	InTeGrate	
	4/25	InTeGrate	
week 15	4/30	Wrap up Integrate Climate Change module	Quiz #13 (Climate of Change)
	5/2	Wrap up semester – prepare for final!	
FINALS	5/9	<b>Final Exam Wednesday May 9, 2pm</b> Do not miss the cumulative final exam	

**NOTE:** Course Syllabus and Class Schedule subject to modification. Any updates to the syllabus and schedule will be posted on EagleOnline.

## Instructional Methods

This class is in-person. The EagleOnline Learning Management System will be used to post some material online. EagleOnline is available at <https://eagleonline.hccs.edu/>. Class notes, handouts and quizzes will be posted on EagleOnline. Announcements for the class will be sent from there. You are expected to log-in to the EagleOnline site once or twice a week to check for announcements, keep in communication, and print anything needed for class.

You are spending a good deal of time, energy and money on this course – please, make the most of your investment! It takes approximately 1 hour of study time for each hour of class time to master the material. So set aside ~3 hours outside of class each week.

## Student Assignments

Prior to class students should look for the pre-class questions as posted in EagleOnline. These will go along with the chapter reading that should be prepared before class. The answers to these questions will be discussed and presented during class.

A series of worksheets will be assigned during the semester. Most of these will be in-class work, some will be take-home. These worksheets will elaborate on concepts presented in the chapter and during lecture. These are a good chance to work with data and quantitative information related to the ocean. The worksheets will be collected and graded. Please pay attention to the deadlines for take-home work.

Students will be expected to submit short reports on current events related to oceans and oceanography. These write-ups will be submitted online via a Discussion Forum style tool. Instructions and expectations for the assignment will be described on EagleOnline.

Near the end of the semester we will spend a couple weeks exploring climate change and climate data. This project will include reading assignments, group work, in-class discussion and some data analysis. The class calendar marks this as “InTeGrate”.

## Student Assessments

**Quizzes:** will be assigned nearly weekly. These will be available on-line on our EagleOnline site. Quizzes will cover information from specific chapters or pairs of chapters. Quizzes will be available on-line for 3 – 5 days. Pay attention to the quiz deadline so that you don’t miss out on the points! These will be the most frequent way of determining if you are keeping up with course material and will allow me to know what topics might need additional clarification. There are NO make-up quizzes for any reason. There may be bonus quiz opportunities to add extra points to your quiz grade total.

**Examinations:** During the semester there will be 2 exams and a final exam. The final exam will wrap-up the semester material during finals week. The exams will consist of a variety of question types including multiple choice, fill-in, short answer, image labeling and sketching. Prior to the exam I will let you know about any materials you will need (ie: calculator, colored pencils, rulers, etc). Exam dates are indicated on the course calendar listed earlier in this syllabus. The Final Exam will include questions from the entire semester cumulatively.

- ***During exams:*** During exams the only thing you will be permitted to have at your desk are your writing tools. All notebooks, books, bags, purses, backpacks, phones, iPods, snacks, and anything else will be placed along the walls or cabinets. If you do not wish to put your belongings on the floor, then you may want to arrange to leave them somewhere else during the exam.

**FINAL EXAM! IMPORTANT DATE! – The final exam for this class is at 2:00 pm, Wed., May 9.**

## Instructor's Requirements

**Missed Examinations:** As a rule, **no make-up** exams will be given and a grade of 0 will be awarded if an exam is missed. Should an exam be missed due to an exceptional situation beyond the student’s control, the situation will be assessed on a case-by-case basis but the instructor should be notified of the situation as soon as possible. Ideally, students should contact the instructor prior to missing a scheduled examination in-person or by e-mail. Contacting the instructor well in advance of any known exam date

conflict is more *likely* to result in a permitted alternative exam date but is not guaranteed. Please note that all ADA and Title IX related accommodations will need to be arranged at least a week before the exam.

**Cell Phone Policy:** Cell phones are important to many of us for communication. However, in the classroom they are distractions. Your job in class is to learn and participate as much as possible. Cell phones and pagers and similar devices should be turned to silent (as in NO NOISE AT ALL) while you are in class. If you need to take/make an emergency call you may talk in the hallway. If you are texting or otherwise fiddling with your device during class you will be asked to put it away. If your phone habits become a nuisance to the classroom you will be asked to leave.

**Tardiness:** Class starts at 2pm. Arriving to class late is disruptive. Please arrive quietly if you are late. When a student is frequently late to class please expect to have a conversation with the instructor about it. Additional tardies may necessitate counselor involvement.

**Technical Compliance:** We will use EagleOnline (Canvas), an internet-based learning management system, which will be used to compliment the classroom course. Additional information on how to access EagleOnline and on the course resources that will be available through it will be provided in class. You are expected to check the EagleOnline site every few days to view pre-class assignments, announcements or messages from the instructor. This will also be where quizzes are hosted as well as review materials. Students are expected to maintain a state of technical compliance, including (but not limited to): up-to-date software as required by EagleOnline (Canvas); a stable Internet connection. The instructor is NOT required to give consideration for lost/missing/unacceptable work stemming from technical non-compliance and/or end-user technical issues. FORM A BACK-UP PLAN – consider NOW where you will go if your home loses power or internet service before you have completed an assignment.

**Academic Honesty:** If plagiarism or academic dishonesty are determined to be part of your quiz, assignment, or exam you can expect a zero on that piece. Anything you submit, small or large, should contain your own thoughts, your work, or work you and a partner agree that you both worked on.

### **Program/Discipline Requirements:**

All HCC policies regarding attendance, withdrawal, academic honesty, students with disabilities, grading, and student rights will be followed in this course. Refer to syllabus section titled "Instructor's Requirements", "HCC Policy Statements", and "Grading" for more details as well as the Student Handbook: <http://www.hccs.edu/resources-for/current-students/student-handbook/>

Where can you get help? Visit your instructor during office hours. Contact your instructor to meet at a time outside of office hours. Get help online via: <https://hccs.upswing.io/> Search for tutoring at HCC at: <http://ctle3.hccs.edu/alltutoring/>

### **HCC Grading Scale**

A = 100- 90 4 points per semester hour  
B = 89 - 80: 3 points per semester hour  
C = 79 - 70: 2 points per semester hour  
D = 69 - 60: 1 point per semester hour  
59 and below = F 0 points per semester hour

FX (Failure due to non-attendance) 0 points per semester hour  
IP (In Progress) 0 points per semester hour  
W (Withdrawn) 0 points per semester hour  
I (Incomplete) 0 points per semester hour  
AUD (Audit) 0 points per semester hour

IP (In Progress) is given only in certain developmental courses. The student must re-enroll to receive credit. COM (Completed) is given in non-credit and continuing education courses.

**FINAL GRADE OF FX:** Students who stop attending class and do not withdraw themselves prior to the withdrawal deadline may either be dropped by their professor for excessive absences or be assigned the final grade of "FX" at the end of the semester. Students who stop attending classes will receive a grade of "FX", compared to an earned grade of "F" which is due to poor performance. Logging into a DE course without active participation is seen as non-attending. Please note that HCC will not disperse financial aid funding for students who have never attended class. Students who receive financial aid but fail to attend class will be reported to the Department of Education and may have to pay back their aid. A grade of "FX" is treated exactly the same as a grade of "F" in terms of GPA, probation, suspension, and satisfactory academic progress.

To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP," "COM" and "I" do not affect GPA.

## Instructor Grading Criteria

Grades for this course are earned based on the divisions listed below. Some consideration is given, when assessing borderline grades, to those students who have demonstrated steady progress and who have actively contributed to class sessions during the semester. (**Note: Students are responsible to keep up-to-date on their cumulative grade total.**)

Quizzes (EO)	=	12% of grade
In Class Exercises	=	15% of grade
Pre-class questions	=	8% of grade
Current Event discussions	=	5% of grade
Exam #1	=	15% of grade
Exam #2	=	15% of grade
Final Exam	=	20% of grade
<u>Climate Change Project</u>	=	<u>10% of grade</u>
Total	=	100%

Final letter grade will be assigned according to the following scale: A = 90 – 100%, B = 80 – 89%, C = 70 – 79%, D = 60 – 69%, F = ≤ 59%

**Extra Credit:** There will be a few extra credit opportunities during the semester. These are good opportunities to add more points to your total score.

## Instructional Materials

Textbook: *Essentials of Oceanography*, 12<sup>th</sup> ed., by Trujillo and Thurman; Pearson/Prentice-Hall, 2017 (ISBN 9780134253947), The HCC bookstores will carry a loose-leaf copy of this book. Also available as an e-book from publisher or HCC bookstore.

## HCC Policy Statements – Read the HCC Student Handbook:

Please familiarize yourself with campus policies in the HCC Student Handbook for topics including: ADA (students with disabilities), Scholastic Dishonesty, General Student Attendance, Repeating courses, Electronic Devices in class, Threatening Behavior, Religious Holidays, Withdrawal processes and more: <http://www.hccs.edu/resources-for/current-students/student-handbook/>

**Attendance:** If you miss class it is your responsibility to find out what assignments or other class material you missed by asking the professor or your classmates.

**Student with Disabilities (ADA):** HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

**Withdrawal Policy:** The withdrawal deadline is **4:30PM, Monday, April 3**. It is the student's responsibility to withdraw from class. A week or 2 prior to the withdraw deadline I might contact you to ask if you intend to stay in the class based on your attendance or scores. You are able and capable of adding the course to your schedule, so you are able and capable of removing it when you decide to drop. If you do not drop and simply stop participating without withdrawing you WILL receive an FX at the end of the semester.

**HCC Sexual Harassment Policy and Title IX:** Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including **pregnancy** and parental status-in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross

Director EEO/Compliance

Office of Institutional Equity & Diversity  
3100 Main  
Houston, TX 77266-7517 or (713) 718-8271 or [Institutional.Equity@hccs.edu](mailto:Institutional.Equity@hccs.edu)

**Student Basic Needs:** Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so.

**HCC Campus Carry statement:** At HCC the safety of our students, staff, and faculty is our first priority. As of August 1, 2017, Houston Community College is subject to the Campus Carry Law (SB11 2015). For more information, visit the HCC Campus Carry web page at <http://www.hccs.edu/departments/police/campus-carry/>

**Early Alert:** HCC has instituted an Early Alert process by which your professor may “alert” you and counselors that you might fail a class because of excessive absences and/or poor academic performance. A counselor will then reach out to you to discuss your progress and offer any relevant resources. This initiative is designed to provide students with support services and resources to assist them in successfully completing their course. See the Student Handbook for additional details.

### **EGLS<sub>3</sub> -- Evaluation for Greater Learning Student Survey System**

At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time near the end of the term, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and department chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term.