



Oceanography-15946

GEOL-1345

RT 2022 Section 09 3 Credits 01/18/2022 to 05/15/2022 Modified 01/30/2022

Course Meetings

Meeting Days

Online asynchronous

Meeting Times

24 H

Meeting Location

Online

Welcome and Instructor Information

Instructor: Dr Peter A Abanda

Email: peter.abanda@hccs.edu

Office: Virtual Online office hours

Phone: (713) 718-6764

Website: <https://learning.hccs.edu/faculty/peter.abanda> (<https://learning.hccs.edu/faculty/peter.abanda>)

What's Exciting About This Course

What's awesome about Oceanography? What isn't awesome about oceanography?!? Earth's oceans are where rock, air, water, and biology meet and interact. Life started in the ocean. Most of Earth's oxygen is created in the ocean. The oceans play a major role in Earth's climate. The oceans are still a frontier waiting to be fully explored! We send probes and satellites and landers out into space and onto celestial bodies, but the maps of the ocean floor are still very blurry compared to maps of Mars surface. Come learn about this branch of Earth Science and the major part of the hydrosphere.

My Personal Welcome

Welcome to the course! My name is Peter Abanda. I am excited to have you register in this course and I look forward to working with in the virtual environment. Please do not hesitate to let me know if you have any course related questions or need guidance on work assigned in the course or any course.

Preferred Method of Contact

Email peter.abanda@hccs.edu

Office Hours

Monday, Tuesday, Wednesday, Thursday, 9:30 AM to 10:45 AM

Course Overview

GEOL 1345 is an introduction to the world's oceans, emphasizing the geological, physical, chemical, and ecological aspects of the marine environment.

Requisites

GEOL 1345 requires college-level reading and writing skills. The minimum requirements for enrollment in GEOL 1345 is qualifying to enroll in INRW 0420 or ESOL 0370/0360 and qualify to place into MATH 0314. Please carefully read and consider the repeater policy in the [HCCS Student Handbook](#).

HCC Program Website

<https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/geology/>
(<https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/geology/>)

Core Curriculum Objectives (CCOs)

GEOL 1345 satisfies the Life and Physical Science requirement in the HCCS core curriculum. The HCC Geology Program Committee has specified that the course address the following core objectives:

- **Critical Thinking:** Students will demonstrate the ability to engage in inquiry and analysis, evaluation and synthesis of information, and creative thinking.
- **Communication Skills:** Students will demonstrate effective development, interpretation and expression of ideas through written, oral, and visual communication. This will be accomplished via assignments such as requiring written reports, essay-style assessment questions, verbal or virtual presentations, or sketching/creating figures and diagrams to express processes.
- **Quantitative and Empirical Literacy:** Students will demonstrate the ability to draw conclusions based on the systematic analysis of topics using observation, experiment, and/or numerical skills. Notably, students will use and interpret graphs and charts in assignments and assessments during the semester.
- **Teamwork:** to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal by working together with other classmates on assignments or a project during the semester.

Student Learning Outcomes and Objectives

Geology Program Student Learning Outcomes (PSLOs)

Can be found at: <https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/geology/>

Course Student Learning Outcomes (CSLOs)

Upon completion of GEOL 1345, the student will be able to:

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.

Departmental Practices and Procedures

Department Specific Instructor and Student Responsibilities

Via this syllabus and the course management system instructors in the Geology Program should

- Provide a clear grading scale
- Communicate expectations and assignment instructions clearly.
- Establish a safe, welcoming, equitable environment for learning
- Encourage students to engage with geoscience topics beyond the textbook
- Announce available supplemental material and learning tools available to students.
- Communicate with students when they are concerned about achievement, completion, or behavior in class.

Program-Specific Student Success Information

In GEOL 1345 you have access to many supplemental materials that accompany the eTextbook in the Pearson Mastering system. There are animations, short tutorial videos, example questions, and more in the "Study Area" of Mastering.

Please see the information about HCC tutoring opportunities listed under **Student Resources** section in the **HCC Policies and Information** heading of the syllabus. (below)

Instructional Materials and Resources

Instructional Materials

The [HCC Online Bookstore \(https://hccs.bnccollege.com/shop/hccs-central/page/find-textbooks\)](https://hccs.bnccollege.com/shop/hccs-central/page/find-textbooks) provides searchable information on textbooks for all courses. Check with your instructor before purchasing textbooks because the book might be included in your course fees.

Add Instructional Materials Here

Essentials of Oceanography

Author: Thurman and Trujillo
Publisher: Pearson
Edition: 13th
Availability: First Day Access

Your instructor will communicate how to access the eText and Mastering system.

Temporary Free Access to E-Book

Here is the link to get temporary free access to a digital version of the text for fourteen days:

<< [add link] >>

Other Instructional Resources

Courseware

Content here...

✓ Course Requirements

Assignments, Exams, and Activities

Type	Weight	Topic	Notes
Discussion Board Exercises	10		Interactive discussion on an assigned topic. Student will research topic and contribute to the discussion and respond to 2 classmates posts.
Unit Exams x 4	40		Assess mastery of content covered in course from various chapters in the textbook.
In-Class Activities	30		Chapter reading assignments including practice questions and timed quizzes.
Final Exam	20		Cumulative final exam will assess mastery of content covered throughout the semester.
Extra Credit			Describe the assignment here.

Grading Formula

Grade	Range	Notes
A	>90	Rounded to the next whole number.
B	80 - <90	Rounded to the next whole number.
C	70 - <80	Rounded to the next whole number.
D	60 - <70	Rounded to the next whole number.
F	<60	Rounded to the next whole number.

* Instructor's Practices and Procedures

Incomplete Policy

Add Content Here

In order to receive a grade of Incomplete ("I"), a student must have completed at least 85% of the work in the course and did not take the final exam. In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

Missed Assignments/Make-Up Policy

Add Content Here

Academic Integrity

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<https://www.hccs.edu/studentprocedures> (<https://www.hccs.edu/studentprocedures>)

Attendance Procedures

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Student Conduct

Add Content Here

Instructor's Course-Specific Information

Add Content Here

Devices

Online quizzes and exams will be proctored using specialized software and electronic devices including cellphones use will not be allowed during testing.

Faculty Statement about Student Success

Complete all assignments on time including reading assignments, quizzes, tests, and exam.

Check course announcements often.

Email me when you have any questions.

Faculty-Specific Information Regarding Canvas

This course section will use Canvas (<https://eagleonline.hccs.edu> (<https://eagleonline.hccs.edu>)) to supplement in-class assignments, exams, and activities.

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

Social Justice Statement

Houston Community College is committed to furthering the cause of social justice in our community and beyond. HCC does not discriminate on the basis of race, color, religion, sex, gender identity and expression, national origin, age, disability, sexual orientation, or veteran status. I fully support that commitment and, as such, will work to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. In this course, we share in the creation and maintenance of a positive and safe learning environment. Part of this process includes acknowledging and embracing the differences among us in order to establish and reinforce that each one of us matters. I appreciate your suggestions about how to best maintain this environment of respect. If you experience any type of discrimination, please contact me and/or the Office of Institutional Equity at 713-718-8271.

HCC Policies and Information

HCC Grading System

HCC uses the following standard grading system:

Grade	Grade Interpretation	Grade Points
A	Excellent (90-100)	4
B	Good (80-89)	3
C	Fair (70-79)	2
D	Passing (60-69), except in developmental courses.	1

Grade	Grade Interpretation	Grade Points
F	Failing (59 and below)	0
FX	Failing due to non-attendance	0
W	Withdrawn	0
I	Incomplete	0
AUD	Audit	0
IP	In Progress. Given only in certain developmental courses. A student must re-enroll to receive credit.	0
COM	Completed. Given in non-credit and continuing education courses.	0

Link to Policies in Catalog and Student Handbook

Here's the link to the HCC Catalog and Student Handbook: <https://catalog.hccs.edu/> (<https://catalog.hccs.edu/>)

In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness
- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

Link to HCC Academic Integrity Statement

<https://www.hccs.edu/student-conduct> (<https://www.hccs.edu/student-conduct>) (scroll down to subsections)

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

<https://www.hccs.edu/campuscarry> (<https://www.hccs.edu/campuscarry>)

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID \(https://www.hccs.edu/email\)](https://www.hccs.edu/email) and activate it now. You may also use Canvas Inbox to communicate.

Office of Institutional Equity

Use the following link to access the HCC Office of Institutional Equity, Inclusion, and Engagement: <https://www.hccs.edu/eeo> (<https://www.hccs.edu/eeo>)

Ability Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, 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 <https://www.hccs.edu/accessibility> (<https://www.hccs.edu/accessibility>)

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
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu (<mailto:Institutional.Equity@hccs.edu>)

<https://www.hccs.edu/titleix> (<https://www.hccs.edu/titleix>)

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/> (<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>)

Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online

- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide.

Canvas Learning Management System

Canvas is HCC's Learning Management System (LMS), and can be accessed at the following URL:

<https://eagleonline.hccs.edu> (<https://eagleonline.hccs.edu>)

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

HCC Online Information and Policies

Here is the link to information about HCC Online classes, which includes access to the required Online Information Class Preview for all fully online classes: <https://www.hccs.edu/online/> (<https://www.hccs.edu/online/>)

Scoring Rubrics, Sample Assignments, etc.

Look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course. <https://eagleonline.hccs.edu/> (<https://eagleonline.hccs.edu/>)

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students during office hours, and before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](https://www.hccs.edu/studenthandbook) (<https://www.hccs.edu/studenthandbook>)

Sensitive or Mature Course Content

In this college-level course, we may occasionally discuss sensitive or mature content. All members of the classroom environment, from your instructor to your fellow students, are expected to handle potentially controversial subjects with respect and consideration for one another's varied experiences and values.

EGLS3

The EGLS³ ([Evaluation for Greater Learning Student Survey System](https://www.hccs.edu/egls3) (<https://www.hccs.edu/egls3>)) will be available for most

courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS³ surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<https://www.hccs.edu/egls3> (<https://www.hccs.edu/egls3>)

Housing and Food Assistance for Students

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

This will enable HCC to provide any resources that HCC may possess.

Student Resources

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](https://www.hccs.edu/tutoring) (<https://www.hccs.edu/tutoring>) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <https://library.hccs.edu> (<https://library.hccs.edu/>).

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <https://www.hccs.edu/supplemental-instruction> (<https://www.hccs.edu/supplemental-instruction>)

Resources for Students:

<https://www.hccs.edu/covid19students> (<https://www.hccs.edu/covid19students>)

Basic Needs Resources:

<https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/> (<https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/>)

Student Basic Needs Application:

<https://www.hccs.edu/basicneeds> (<https://www.hccs.edu/basicneeds>)

COVID-19

Here's the link to the HCC information about COVID-19:

<https://www.hccs.edu/covid-19> (<https://www.hccs.edu/covid-19>)

Instructional Modalities

In-Person (P)

Safe, face-to-face course with scheduled dates and times

Online on a Schedule (WS)

Fully online course with virtual meetings at scheduled dates and times

Online Anytime (WW)

Traditional online course without scheduled meetings

Hybrid (H)

Course that meets safely 50% face-to-face and 50% virtually

Hybrid Lab (HL)

Lab class that meets safely 50% face-to-face and 50% virtually

Copyright Statement

In order to uphold the integrity of the academic environment and protect and foster a cohesive learning environment for all, HCC prohibits unauthorized use of course materials. Materials shared in this course are based on my professional knowledge and experience and are presented in an educational context for the students in the course. Authorized use of course materials is limited to personal study or educational uses. Material should not be shared, distributed, or sold outside the course without permission. Students are also explicitly forbidden in all circumstances from plagiarizing or appropriating course materials. This includes but is not limited to publically posting quizzes, essays, or other materials. This prohibition extends not only during this course, but after. Sharing of the materials in any context will be a violation of the HCC Student Code of Conduct and may subject the student to discipline, as well as any applicable civil or criminal liability. Consequences for unauthorized sharing, plagiarizing, or other methods of academic dishonesty may range from a 0 on the specified assignment and/or up to expulsion from Houston Community College. Questions about this policy may be directed to me or to the Manager of Student Conduct and Academic Integrity.

Course Calendar

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

<i>WEEK</i>	<i>TOPICS</i>
1	Introductions, Overview of Course & Chapter 1
	Chap 1: Matter and Minerals
	Complete reading assignment and take quiz
2	Chap 2: Plate Tectonics.
	Complete reading assignment and take quiz
3	Chapter 3 Marine Provinces

	Complete reading assignment and take quiz
4	Chapter 4: Marine Sediments
	Complete reading assignment and take quiz
5	Chapter 5: Water and Seawater
	Complete reading assignment and take quiz
	Review and take Exam 1
6	Chapter 6: Air-Sea Interaction
	Complete reading assignment and take quiz
7	Chapter 7: Ocean Circulation
	Complete reading assignment and take quiz
8	Chapter 8: Waves and Water Dynamics Complete
	Complete reading assignment and take quiz
	SPRING BREAK March 14-20
9	Chapter 9: Tides
	Complete reading assignment and take quiz
	Review and take exam 2

10	Chapter 10: Beaches, Shoreline Processes and Coastal
	Complete reading assignment and take quiz
	<i>Withdrawal deadline: APRIL 4, 2022</i>
11	Chapter 11: Marine Pollution
	Complete reading assignment and take quiz
12	Chapter 12: Marine Life and the environment
	Complete reading assignment and take quiz
	Review and take exam 3
13	Chapter 13: Biological Productivity & Energy Transfer
	Complete reading assignment and take quiz
14	Makeup missed work
15	Final Review
	Semester wrap-up
16	FINAL EXAM -date & time -Do not miss the final exam.

Additional Information

Departmental/Program Information

The Geology Program faculty are excited you are participating in this course! Please visit the LearningWeb page to find additional information about the HCC Geology A.S. degree plan, links to Geoscience programs across Texas, careers in Geosciences, Diversity in Geosciences, and program contact information.

<https://learning.hccs.edu/programs/geology> (<https://learning.hccs.edu/programs/geology>)

Completing the HCC Geology A.S. degree plan will satisfy the first two years of requirements for many University geoscience programs including core curriculum and prerequisites for upper-division courses.

HCC has many transfer agreements with Texas universities for geology and geoscience undergraduate degree paths. You can find the information about transfer agreements here: <https://www.hccs.edu/support-services/transfers/> (<https://www.hccs.edu/support-services/transfers/>)

Additionally, students can find more information about Science, Technology, Engineering, and Math (STEM) opportunities and events on the HCC STEM page: <https://www.hccs.edu/stem> (<https://www.hccs.edu/resources-for/current-students/stem--science-technology-engineering--mathematics/>)

Process for Expressing Concerns about the Course

If you have concerns about any aspect of this course, please reach out to your instructor for assistance first. If your instructor is not able to assist you, then you may wish to contact the Natural Science Department Chair, Dr. Cyril Anoka. The phone number is 713-718-5569

The Department of Natural Science can be contacted via phone 713-718-6050 or email natural.sciences@hccs.edu

The procedures for HCC student grievance are described at:

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/>
