

Hudson County Community College

Introduction to Environmental Chemistry, CHP 105

Course: CHP – 105

Course Title: Introduction to Environmental Chemistry

Credits: 4

Instructor:

Day(s) and Time (s):

Location

Office Hours:

Office Location:

Email:

Course Description: In this course we cover the chemical composition of earth's atmosphere, hydrosphere, lithosphere and investigates the process, both natural and man-made, that affects these spheres. Students also explore the links between these processes and current topics of interest such as: ozone depletion, global warming and climate change, nuclear and fossil fuel energy production and waste disposal and contamination. In parallel with this applied approach to environmental chemistry students are introduced to fundamental concepts in Chemistry such as: atomic theory, acid-base and pH measurements, light, heat and energy. Environmental concepts will be used in order to elucidate these essential ideas.

Lab: Labster simulations.

Course Prerequisite: Basic Math

Student Learning

Outcome:

Upon completion of this course you should be able to:

- Recognize and interpret basic chemical equations
- Describe the structure of atoms and the distinction of atoms of different elements
- Describe and identify important chemical process in the atmosphere

- Evaluate the chemical process of ozone depletion
- Recognize the causes of acid rain
- Explain the fundamental concepts of acid-bases and pH
- Discuss key concepts of global warming and climate change
- Categorize different types of energy
- Describe the composition of earth and the oceans
- Identify the sources and effects of heavy metal contamination.

Textbook: There are no specific textbooks assigned for this course. Instead a series of open resources will be used. Here is a list of suggested URLs:

[18: Chemistry of the Environment - Chemistry LibreTexts](#)
[Virtual ChemBook](#)

Attendance: The college policy is generally that a student may fail a course due to lack of attendance if s/he missed more than 6 hours of instructional time for a 3-credit course.

Grading Policy: Lecture (remote) 100%

There will a total of 5 quizzes and a mandatory final. I will drop the lowest grade of all five quizzes. There are no make-up quizzes. Missing a quiz will result in a zero. The exams and quizzes will be assigned via CANVAS and will have to be taken during the class time.

You are required to attend all classes even if you get A in first two tests.

Grading:

100 - 94 = A	69 - 64 = C+
93 - 90 = A-	63 - 54 = C
89 - 84 = B+	53 - 50 = D
83 - 75 = B	Below 50 = F
74 - 70 = B-	

Mandatory Use of HCCC Email Address:

Members of the HCCC community are required to check their official HCCC email address in order to stay current with College and course communications. All college business communication between faculty, students, and staff must be sent via an official

HCCC email address. If an employer or student elects to forward or link his/her HCCC email to a separate and private account, that individual remains responsible for all material transmitted to that account. Employees of HCCC shall not be responsible for any material that remains undelivered, due to defects in the private non-HCCC accounts. Failure in the operations of private email accounts shall not be cause for excuse from communications between the students and the employee. Students that encounter difficulty with HCCC email should view the FAQ's section on the Portal.

Incomplete:

An INCOMPLETE grade for the course is given under specific conditions when a student, because of serious and unexpected reasons, cannot complete the requirements of the course. For example, if a student did not attend the final because of illness his or her excuse must be verified by a physician. Other absences from other assigned activities must be made up at another appointed time. To arrange for an incomplete grade, the student must see the instructor before final exam, so proper documentations could establish and submitted to Division and The office of Academic Affairs.

Disability Support Services:

Students with disabilities who believe that they might need accommodations in this class are encouraged to contact Disability Support Services at (201) 360-4157, as soon as possible to better ensure that such accommodations are implemented in a timely fashion. All disabilities must be documented by a qualified professional such as a Physician, Licensed Learning Disabilities Teacher Consultant (LDTC), Psychiatrist, Psychologist, Psychiatric Nurse, Licensed Social Worker or Licensed Professional Counselor, who is qualified to assess the disability that the student claims to have and make recommendations on accommodations for the student. All information provided to the Disability Support Services Program will be confidential between the program, professors involved with the student, and individual student.

Academic Integrity Standards:

Academic integrity is central to pursuit of education. For students at HCCC, this means maintaining the highest ethical standards in completing their academic work. In doing so, students earn college credits by their honest efforts. When they are awarded a certificate or degree, they have attained a goal representing genuine achievement and can reflect with pride on their accomplishment. This is what gives college education its essential value.

Violations of the principals of academic integrity include:

- Cheating on exams
- Reporting false research data or experimental results

- Allowing other students to copy one's work to submit to instructors
- Communicating the contents of an exam to other students who will be taking the same test
- Submitting the same project in more than one course, without discussing this first with instructor
- Submitting *plagiarized* work. *Plagiarism* is the use of another writer's words or ideas without properly crediting that person. This unacknowledged use may be from published books or articles, the Internet, or another student's work.

Violation of Academic Integrity:

When students act dishonestly in meeting their course requirements, they lower the value of education for all students. Student who violate the college's policy on academic integrity are subject to failing grades on exams or projects, or for the entire course. In some cases, serious or repeated instances of academic integrity violations may warrant further disciplinary action.

Detailed information on the College's Academic Integrity policy may found in the *HCCC Student Handbook*. The handbook also contains useful information for students on completing research projects and avoiding plagiarism.

Classroom Recording Policy at HCCC

Student Classroom Recording Policy

- Hudson County Community College prohibits the audio-visual recording, transmission, and distribution of classroom sessions. Classes may only be recorded with the advance written permission of the instructor. The Hudson County Community College classroom recording policy must be listed in all syllabi.
- All classroom recordings can only be used for academic purposes by students enrolled in that class. Recordings may not be shared, reproduced, or uploaded to public websites or other mediums, and these recordings may contain copyrighted material and are prohibited from any form of commercial use.
- All students and guests must be informed that the class may be recorded. Due to issues related to privacy and the possible inhibition of student participation, instructors should be mindful of the effects of permitting classroom recording.
- Instructors should retain electronic or paper copies of their written consent to grant classroom recordings.
- Students must destroy their recordings at the end of the semester.
- Students who are granted permission to record their class by the office of Disability Support Services should inform the instructor beforehand and are subject to the policies outlined in this document.

- Violation of this policy is subject to disciplinary action listed under the code of conduct as included in the Student Handbook.

Instructor Classroom Recording Policy

- Instructors may record their classes if students are informed in writing in advance that recording will take place. Instructors may distribute their own lectures, but this must be limited to the lecture portion of the class. Recordings of student presentations or activities may be used in the class if the students are notified in advance of the recording. Recordings of student presentations or activities may not be distributed in any way without the advance written consent of the students.

Hudson County Community College has many supportive services available to help meet your goals. Below are resources available to you:

<p>SECURITY: Main Campus: 201-360-4080 North Hudson Campus: 201-360-4777</p>	<p>NATIONAL SUICIDE PREVENTION LIFELINE: 1-800-273-8255 CRISIS TEXT LINE: Text “HELLO” to 741-741</p>	
<p>IN AN EMERGENCY, PLEASE CONTACT SECURITY OR 911.</p>		
Department	Journal Square Campus	North Hudson Campus
<p>Counseling Services counseling@hccc.edu</p>	<p>201-360-4150 A Building, 2nd Floor https://my.hccc.edu/advisemen t</p>	<p>201-360-4627 1st Floor, Enrollment Center https://my.hccc.edu/advisemen t</p>
<p>Advising Services advising@live.hccc.edu</p>		
<p>Accessibility Services as@hccc.edu</p>	<p>201-360-4163 A Building, 2nd Floor https://my.hccc.edu/as</p>	<p>201-360-4163 1st Floor, Enrollment Center https://my.hccc.edu/as</p>
<p>Career Services career@hccc.edu</p>	<p>201-360-4184 A Building, 3rd Floor https://my.hccc.edu/career-services</p>	<p>201-360-4138 2nd Floor, Room 204 https://my.hccc.edu/career-services</p>
<p>Food Pantry foodpantry@hccc.edu</p>	<p>201-360-4701 J Building, Lower Level Room 002 my.hccc.edu/hudson-helps</p>	<p>201-360-4709 5th Floor, Room 513A my.hccc.edu/hudson-helps</p>
<p>Financial Aid financial_aid@hccc.edu</p>	<p>201-360-4200 A Building, 2nd Floor https://my.hccc.edu/fa</p>	<p>201-360-4214 1st Floor, Enrollment Center https://my.hccc.edu/fa</p>

Information Technology Services itshelp@hccc.edu	201-360-4310 A Building, Lower Level https://my.hccc.edu/its	201-360-4309 3 rd Floor, Room 309 https://my.hccc.edu/its
Library Journal Square librarian@hccc.edu North Hudson librarynhc@hccc.edu	201-360-4360 L Building, 1 st Floor http://www.hccclibrary.net/	201-360-4623 3 rd Floor http://www.hccclibrary.net/
Tutoring Center tc@hccc.edu	201-360-4187 L Building, Lower Level https://my.hccc.edu/tutoring	201-360-4779 7 th Floor, Room 704 https://my.hccc.edu/tutoring/
Writing Center wc@hccc.edu	201-360-4370 J Building, Room 204 https://my.hccc.edu/tutoring	201-360-4779 7 th Floor, Room 704 https://my.hccc.edu/tutoring/

Introduction to Environmental Chemistry (CHP 105)

Tentative Course Schedule

Topic 1-Fundamentals of Chemistry-Atomic theory and chemical reactions

Topic 2- Chemical Composition and Physical Profile of the Atmosphere

Topic 3-Ozone Depletion, Photochemical Processes, Chemical Reactions and Stoichiometry

Exam 1

Topic 4-Tropospheric Chemistry: Photochemical smog, Acid Rain, Acid-Base Theory, pH

Topic 5-Global warming and climate change. Principles of heat and energy

Topic 6-Greenhouse effect and contributing factors

Exam 2

Topic 7-Radioactivity, nuclear energy, nuclear waste and nuclear accidents

Topic 8-Renewable energy and alternative fuels

Topic 9-The composition of earth and oceans

Exam 3

Topic 10-Soil treatment and water treatment

Topic 11-Toxic organic pollutants: from DDT to PBC's

Topic 12-Contamination by Heavy metals. Treatment and remediation of water and soil

Final exam.

The course schedule may be subject to change depending on the progress of the course and needs of the students.