

# Hudson County Community College

## College Chemistry II, CHP 211

**Course:** CHP – 211-01

**Course Title:** College Chemistry 11

**Credit:** 4

**Instructor:**

**Day(s) and Time (s):**

**Location**

**Office Hours:**

**Office Location:**

**Email:**

**Course Description:** This course is a continuation of College Chemistry I and an introduction to physicochemical concepts. Topics cover reaction rate, chemical equilibria, precipitation, acid-base, complexion, redox, electrochemistry, nuclear reactions and thermodynamic quantities. Laboratory work introduces experiments pertinent to lecture subjects and consists of semi qualitative analysis.

**Lab:** You MAY NOT make-up a lab experiment missed. Five lab reports will be graded. Lab reports may not be hand written. Lab reports should be submitted individually.

Each lab report must have:

- Cover page which includes: The experiment name.
- Introduction/ Background
- Data and calculation (submit the page from your lab manual)
- Conclusion

**Homework:** Homework assignments are given every week.

**Research Paper:** A 3 to 5 page paper APA or MLA style with at least three Reference. At least one reference should be a paper. In other words you may NOT have all citations as http or www. You may only choose from the following topics: Renewable Energy, Bio-

fuels, Green Technology, Recycling, Hybrid cars, Wind farming, Pollution Prevention, Environmental Issues etc.

**Course Prerequisite:** CHP 111

**Student Learning**

**Outcome:** Course Objectives: Upon completion of this course you should be able to:

- Explain Intermolecular forces
- Understand Solution Properties and able to do concentration analysis
- Understand basic principles of reaction rate and chemical equilibrium
- Apply the equilibrium concepts to acid-base, precipitation, and metal-complex formation
- Relate redox concept to electrode reactions
- Familiarize with radioactivity and mass-energy conservation
- Use laws of thermodynamics to account for heat change, PV-work, randomness change, and reaction direction to establish an equilibrium state.

*Apply proficient laboratory skills:*

- *select proper sample size, equipment size, and experimental setup*
- *correctly use laboratory equipment;*
- *apply lecture concepts in the laboratory*

**Text Book:** “*Chemistry: The Central science*” 13<sup>th</sup> Edition, Prentice Hall Publishing

**Author(s):** Theodore L. Brown; H. Eugene LeMay; Bruce E. Bursten; Catherine J. Murphy; Patrick M. Woodward; Matthew W. Stoltzfus

**ISBN-13:** 978-0-321-91041-7

*Lab Manual specific to CHP-111 (available at book store)*

**Book Purchase:** Since we use the book and lab manual extensively in and out of the class, you must buy them before our second meeting. In case you need to wait for the book voucher, it is your responsibility to find a way to make copies of the readings assigned from the books. Any

student who has true financial need is eligible to apply for a book scholarship through the Office of the Dean of Students located at 70 Sip Avenue.

**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:**

Three exams	75 points
Quizzes	5 points
Lab	5 points
Home Works	5 points
Research Paper	5 points
Class Participation	5 points

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

**Breakdown of 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-	

**Safety in the Lab: and Classroom**

Students are required to read the laboratory safety rules, ask any question they may have, sign and return the bottom part of safety rule sheet.

- **ALL SOCIAL DISTANCING RULES MUST BE FOLLOWED.**
- **YOU MUST WEAR A MASK when in the laboratory room. You will be asked to leave the lab if you are caught not wearing a mask. NO EXCEPTIONS.**
- **NO EATING or DRINKING in the lab.**

This includes having a closed soda, or juice, or coffee, or tea, or water on the desk while we are in the chemistry lab.

- **YOU MUST WEAR SAFETY GOGGLES** when conducting experiments in the lab.

**Cell Phone Use Policy:**

Cell phones should be on manner mode. In case of emergency, notify me and then leave. Leaving classroom for non-emergency calls will result a zero grade in one test. **NO texting during**

lectures or exams! Cell phones may NOT be used during exams

**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.

Successful people access support from others when needed. Hudson County Community College has many supportive services available to help you meet your goals. You are encouraged to contact your instructors or other professionals on campus. Below are resources available to you.

**IN AN EMERGENCY, PLEASE CONTACT SECURITY or 911.**

	<b>Journal Square Campus</b>	<b>North Hudson Campus</b>
<b><u>Counseling Services</u></b> <a href="mailto:counseling@hccc.edu">counseling@hccc.edu</a>	201-360-4150 A Building, Floor 2 <a href="https://myhudson.hccc.edu/advisement">https://myhudson.hccc.edu/advisement</a>	201-360-4150 Enrollment Center, Floor 1 <a href="https://myhudson.hccc.edu/advisement">https://myhudson.hccc.edu/advisement</a>
<b>The National Suicide Prevention Lifeline: 1-800-273-8255</b> <b>Crisis Text Line: Text HELLO to 741-741</b>		
<b><u>Advising Services</u></b> <a href="mailto:advising@live.hccc.edu">advising@live.hccc.edu</a>	201-360-4150 A Building, Floor 2 <a href="https://myhudson.hccc.edu/advisement">https://myhudson.hccc.edu/advisement</a>	201-360-4150 Enrollment Center, Floor 1 <a href="https://myhudson.hccc.edu/advisement">https://myhudson.hccc.edu/advisement</a>
<b><u>Career Development</u></b> <a href="mailto:career@hccc.edu">career@hccc.edu</a>	201-360-4181 A Building, Floor 3 <a href="https://myhudson.hccc.edu/career-development">https://myhudson.hccc.edu/career-development</a>	201-360-4181 Floor 2, Room 204 <a href="https://myhudson.hccc.edu/career-development">https://myhudson.hccc.edu/career-development</a>
<b><u>Disability Support Services</u></b> <a href="mailto:dss@hccc.edu">dss@hccc.edu</a>	201-360-4157/4163 A Building, Floor 2 <a href="https://myhudson.hccc.edu/dss">https://myhudson.hccc.edu/dss</a>	201-360-4157/4163 Enrollment Services, Floor 1 <a href="https://myhudson.hccc.edu/dss">https://myhudson.hccc.edu/dss</a>
<b><u>Library</u></b> Journal Square <a href="mailto:librarian@hccc.edu">librarian@hccc.edu</a> North Hudson <a href="mailto:librarynhc@hccc.edu">librarynhc@hccc.edu</a>	201-360-4360 L Building, Floor 1 <a href="http://www.hccclibrary.net/">http://www.hccclibrary.net/</a>	201-360-4605 Floor 3 <a href="http://www.hccclibrary.net/">http://www.hccclibrary.net/</a>
<b><u>Tutoring Center</u></b> <a href="mailto:tc@hccc.edu">tc@hccc.edu</a>	201-360-4187 Lower Level of Library Building <a href="https://myhudson.hccc.edu/tutoring">https://myhudson.hccc.edu/tutoring</a>	201-360-4623 Floor 5, Room 511 <a href="https://myhudson.hccc.edu/tutoring">https://myhudson.hccc.edu/tutoring</a>
<b><u>Writing Center</u></b> <a href="mailto:wc@hccc.edu">wc@hccc.edu</a>	201-360-4370 J Building, Room 204 <a href="https://myhudson.hccc.edu/tutoring">https://myhudson.hccc.edu/tutoring</a>	201-360-4779 Floor 7, Room 703A <a href="https://myhudson.hccc.edu/tutoring/">https://myhudson.hccc.edu/tutoring/</a>

## College Chemistry II (CHP 211)

### *Tentative Course Schedule*

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1. Introduction to the course, grading policy, course Requirements. **Safety Rules** in the laboratory, Glassware  
  
Chapter 14 - Chemical Kinetics  
  
Chapter 14 - Chemical Kinetics
- 2 Chapter 14 - Chemical Kinetics  
  
**Lab 1: Reaction Rate of An Iodine Clock**
- 4 Chapter 15 - Chemical Equilibrium  
  
**Lab 2: Chemical Equilibrium Shifts**
- 5 Chapter 15 - Chemical Equilibrium  
  
Chapter 13 - Properties of Solution
- 6 ----- **No Class (Convocation)** -----  
  
Chapter 13 - Properties of Solution
- 7 Chapter 13 - Properties of Solution  
  
**(Review 11,13,14,15)**  
  
**Exam 1**
- 8 Chapter 16 - Acid\_Base Equilibria  
  
Chapter 16 - Acid\_Base Equilibria
- 9 Chapter 16 - Acid\_Base Equilibria  
  
**Lab 3: pH of Salt Solutions**  
**Lab 4: Hardness of Water**



- 10 Chapter 17 - Aqueous Equilibria  
**Lab 5 - Properties of Buffers)**
- 11 Chapter 17 - Aqueous Equilibria  
**Lab 6 - Neutralization of Antacid)**
- 12 Chapter 17 - Aqueous Equilibria  
**Lab 8: Solubility of Ionic Precipitates  
(Review 16, 17)**
- 13 **Exam 2**
- Chapter 19 - Chemical Thermodynamics
- 14 Chapter 19 - Chemical Thermodynamics  
Chapter 20 – Electrochemistry
- 15 Chapter 20 – Electrochemistry  
**Lab 11: Voltaic Cell Measurements**
- 16 Chapter 20 – Electrochemistry  
Chapter 21 - Nuclear Chemistry
- 17 Chapter 21 - Nuclear Chemistry  
**(Review 19, 20, 21)**
- Final Exam***