

Principles of Chemistry II CP 2130 Section: 7B1 SUMMER 2023 JULY 5 – AUGUST 3

Credits: 3.000 CRN: 35151 M/T/W/R 9:00 am – 11:30 am

Instructor: Dr. Jim Dimitrakopoulos Classroom: NSB S-100

Email: Dimitrakopoulosj@oldwestbury.edu

Office: NSB 246

Office Hours:M/T/W/R 12:00 pm – 1:00 pm

**Course Description**

This is a second semester of general chemistry course designed to provide students with an in-depth study of fundamentals of chemical kinetics, equilibrium, acid-base chemistry, acid-base equilibria and solubility equilibria, thermodynamics, redox, electrochemistry, and nuclear chemistry. **Prerequisites: C or better in both Principles of Chemistry 1 (CP 2120) and MA1020 or higher.**

**Learning Outcomes**

This course meets the SUNY learning objectives for the Natural Sciences domain and Critical Thinking competencies of Old Westbury’s General Education program. Students will

* gain familiarity with the vocabulary, unifying principles and tools of one or more of the sciences.
* improve quantitative skills by working problems, interpreting quantitative data and creating graphical displays of scientific data.
* develop an appreciation for scientific principles and processes at work in their environment.

Our emphasis will be on conceptual understanding, quantitative analysis, and critical thinking.

**Course Objectives**

* To acquire familiarity with the language of chemistry
* To explore the structure, properties and behavior of pure substances and mixtures
* To understand the driving forces behind chemical reactions
* To gain competency in quantitative chemical calculations

**Your Approach to Chemistry**

Principles of Chemistry introduces the ideas, vocabulary, and models that scientists use to describe the nature of matter and how matter is transformed during chemical reactions. As such, Principles provides a basis for understanding chemistry in the world around you, and serves as a foundation for many future courses, including organic and biochemistry. You can master this material, and prepare yourself well for the next level, by an active approach to learning. In this course, we encourage you to focus on understanding concepts and to practice applying them to new situations. Being able to solve problems is the best test of your understanding and working many problems will give you confidence in your abilities.

A grade of C or better in CP 2120 Principles of Chemistry 1 is required to take this course. Our experience shows that students who do not have adequate preparation from Principles I cannot successfully complete Principles 2. We often use mathematical concepts and manipulations to develop and illustrate chemical principles. **This course has a prerequisite of College Algebra or higher; Precalculus is recommended. You are expected to be comfortable with such topics as solutions to equations, ratios, percents, logarithms and exponentials, scientific notation, polynomials, roots and graphs of functions. If you are rusty with these topics, keep an algebra book handy for review, and seek help from the tutors when necessary.**

I expect you to read each of the assigned chapters before each class, and to work problems to test your understanding of the material. The presentations, practice homework problems, classwork, and other files are posted on BRIGHTSPACE under “Content”.  Be sure to keep up with the reading and HW problems; don't leave them for the last minute.  **A rule of thumb is that students should spend 2-3 hours studying outside class for every one hour in class, so that is 16-18 hours studying per week.** If you spend about two hours per day, you will do fine, but if you leave it all for one day each week, it will be overwhelming. Studying includes reading the textbook, working out problems, reviewing your notes and the lecture presentations, making summaries of concepts, lists of equations, new vocabulary, and questions that you have.  I look forward to helping you enjoy and succeed in chemistry!

**COURSE REQUIREMENTS, POLICIES, GRADING**

**Textbook and Supplies**

The textbook is **General Chemistry, 11th Edition** by Ebbing and Gammon. Publisher: Cengage.

You will need a **scientific calculator**. Be sure you know how to use your calculator properly and efficiently. You will not be able to use your cell phone or smart watch calculator on exams.

**Laboratory**

This course may be taken with or without the accompanying one-credit laboratory, CP2131. I will make every effort to keep the lab and lecture in sync, but occasionally you will need to read ahead in the text to fully understand the lab. The two courses are graded independently.

**Exams & Quizzes**

**We will have THREE (3) IN-CLASS exams and THREE (3) ONLINE quizzes.** Dates for the exams are listed below. Quiz dates TBA. **There are NO makeup exams or quizzes.** For every exam you miss your final grade will be reduced by a letter grade, and every quiz you miss your final grade will reduced by a letter gradient. **All exams and quizzes will be given during regular lecture hours.**

**NO EXCEPTIONS WILL BE MADE!!!!!!!!!!!!!!**

**1st Exam Ch. 11-13 MONDAY JULY 17**

**2nd Exam Ch. 14-15 MONDAY JULY 24**

**Final Exam Ch. 16-20 THURSDAY AUGUST 3**

**Grading**

Your grade will be based on **THREE (3) EXAMS (80%)** and **THREE (3) QUIZZES (20%)**.

The only **EXTRA CREDIT** that will be available to anyone is to submit the HOMEWORK for each exam no later than at the time of the exam for up to 5 extra credit points on that exam.

The percentage values for final grading are:

 100-93% A 92-90% A-

 89-87% B+ 86-83% B 82-80% B-

 79-77% C+ 76-73% C 72-70% C-

 69-67% D+ 66-63% D 62-60% D- 59-0% F

**Homework**

Problem solving is essential to mastering chemistry. Problems from the textbook will be assigned from each chapter. You should work out the answers to the problems in a separate section of your notebook or on loose leaf paper if you will be handing in your HW for up to 5 extra credit points on the exam to which the HW corresponds. I am available during my office hours to provide help and feedback. I also encourage you to ask questions about the HW during class. If you want me to go over a problem, please write the problem(s) on the board before class begins. I will start class by answering questions about HW and any other material you have questions about. **An important step in learning anything is being able to ask questions. A teacher can show you how to work problems and guide you along the way, but you will only truly learn new things when you struggle to figure them out. Being able to formulate a question is a critical part of that process.**

**Attendance and Punctuality**

You are expected to attend all classes and show up on time – experience shows that students who regularly miss class have a much greater chance of withdrawing or performing below par. If you miss a class, then take the class notes from a classmate. **You are responsible for whatever I say in each session.**

**Excuses such as “I didn’t know” are not acceptable. It is your responsibility to know.**

**Grade of “Incomplete”**

The College bulletin allows faculty to assign a grade of “Incomplete” when circumstances such as accident or illness make it impossible for the student to complete course work by the end of the semester, as long as the student has completed most of the course work at a passing level. The grade of “I” cannot be used to allow students to “try again” the following semester.

**Brightspace and E-mail**

In case of cancelled classes or changes in exams, I will post announcements on Brightspace. Course documents and grades will be posted on the Brightspace web site, accessible from the Old Westbury web site. During the course, if you are having any issues with Brightspace or your email account, please email [servicedesk@oldwestbury.edu](http://servicedesk@oldwestbury.edu) for assistance. I will communicate with you ONLY through your Old Westbury email. I will not use your personal email address or that of another college.

**Withdrawal**

The College bulletin gives the deadline for withdrawal without a faculty signature, and the last day for withdrawal with a signature. **I WILL NOT APPROVE WITHDRAWALS AFTER THE DEADLINE.**

**Academic Integrity**

Plagiarism is presenting the work of others as if it is our own. Providing or receiving exam questions or answers to another person or entity is academic dishonesty. **Plagiarism and other academic dishonesty, such as cheating on an exam, will be punished by a grade of F (failure) in the course.**  Know what academic dishonesty is and how to avoid it - in this matter, ignorance is never an acceptable excuse. Further details can be found in the Student Code of Conduct and on the College web site: <https://www.oldwestbury.edu/policies/academic-integrity>

**BASIC NEEDS STATEMENT**

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 at (516)876-3067 or Student Union 303.  The College's Panther Food Pantry offers food and personal care items to the campus community in Student Union 301B. The service is anonymous, OW ID is not required. The Pantry website is  [https://tinyurl.com/yb36bdxc](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Ftinyurl.com%2Fyb36bdxc&data=05%7C01%7Cdimitrakopoulosj%40oldwestbury.edu%7C09a7fa432edf4a63158508da74bf1616%7Cf5089034f2334f12a71638b7f4904370%7C0%7C0%7C637950661372129598%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=w7vBJoJweibx7UvuvOVR9jYhLQ0jK7QxlZXNmHKHQY4%3D&reserved=0)

**COUNSELING RESOURCES**

As a college student, there may be times when personal stressors interfere with your academic performance or negatively impact your daily life. If you or someone you know at this college is experiencing mental health challenges, please call the Counseling and Psychological Wellness Services at 516-876-3053 or email us at counselingcenter@oldwestbury.edu. We’re located at the Student Union, Lower Level, Suite 100, and are open Monday to Friday, 9am to 5pm. All services are entirely free and confidential. Students may choose to receive counseling services either in-person, by phone or via video-chat.

If a crisis occurs after hours, contact a Residential Director. The University Police, at 516-876-3333, will also be able to help. The National Suicide Prevention Lifeline also offers help 24/7 and can be contacted at 1-800-273-8255.

**TITLE IX, SEXUAL DISCRIMINATION, HARASSMENT AND VIOLENCE**

SUNY Old Westbury prohibits sexual discrimination, harassment and violence, and will promptly respond to all complaints.  The purpose of Title IX is to prevent sex discrimination on campus, address reported assaults and incidents, limit the effects of harassment on the educational environment, and prevent its recurrence.  If you or someone you know believes they have been subjected to sexual discrimination, harassment or violence, help is available. To report or for more information please visit [https://www.oldwestbury.edu/title-ix](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.oldwestbury.edu%2Ftitle-ix&data=05%7C01%7Cdimitrakopoulosj%40oldwestbury.edu%7C09a7fa432edf4a63158508da74bf1616%7Cf5089034f2334f12a71638b7f4904370%7C0%7C0%7C637950661372129598%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=z2GKJZCCGmTVvQi41cZrxhyMdPfZ9jtwraev%2FfOYCzQ%3D&reserved=0), please contact the Title IX coordinator, Deputy Title IX coordinator or University Police at 516-876-3333. Confidential resources and support are also available from the counseling professionals in the Counseling & Psychological Wellness Services department, located in the Student Union Lower Level Room LL100 (off the Rotunda) at 516-876-3053.

* **Stephanie Iaccarino, CRC (Faculty/Staff/Student Reports)**
Deputy Title IX Coordinator
Campus Center H-418B
Phone: 516-876-2740
Email: iaccarinos@oldwestbury.edu

**ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES:**

If you have a physical, psychological, medical or learning condition that may impact your course work, please contact Stacey DeFelice, Director, Office of Services for Students with Disabilities (OSSD), NAB 2065, Phone: 516-628-5666, Email: defelices@oldwestbury.edu.
The office will help you determine if you qualify for accommodations and assist you with the process of accessing them. All support services are free and all contacts with the OSSD are strictly confidential. SUNY Old Westbury is committed to assuring that all students have equal access to learning activities and social activities on campus. [https://www.oldwestbury.edu/academics/support/OSSD](https://nam12.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.oldwestbury.edu%2Facademics%2Fsupport%2FOSSD&data=05%7C01%7Cdimitrakopoulosj%40oldwestbury.edu%7C95670f31b9a34147081c08da7eb5be23%7Cf5089034f2334f12a71638b7f4904370%7C0%7C0%7C637961616402021963%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000%7C%7C%7C&sdata=ZVV0S9wBjWFOeJRQKRbw7jIdUw2vKTmbO2Vvg7BFYxU%3D&reserved=0)

**Summer 2023 COVID-19 Guidance**

<https://www.oldwestbury.edu/covid>

**SUMMER 2023 TENTATIVE SCHEDULE**

**CP 2130 PRINCIPLES OF CHEMISTRY II**

**TEXT: General Chemistry, 11th Edition, Ebbing and Gammon, Cengage Publishing**

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| --- | --- | --- |
| **DATE** | **TOPIC** | **TEXT CHAPTER**  |
| July 5 WEDNESDAY  | States of Matter | 11 |
| July 6 THURSDAY | States Of Matter | 11 |
| July 10 MONDAY | Solutions | 12 |
| July 11 TUESDAY | Solutions | 12 |
| July 12 WEDNESDAY | Reaction Rates | 13 |
| July 13 THURSDAY | Reaction Rates | 13 |
| **July 17** **MONDAY** | **EXAM #1 MONDAY (Chapters 11-13)** |  |
| July 18 TUESDAY | Chemical Equilibrium | 14 |
| July 19 WEDNESDAY | Chemical Equilibrium | 14 |
| July 20 THURSDAY | Acid-Base Concepts | 15 |
| **July 24** **MONDAY** | **EXAM #2 MONDAY (Ch. 14-15)** |  |
| July 25 TUESDAY | Acid-Base Equilibria | 16 |
| July 26 WEDNESDAY | Acid-Base Equilibria | 16 |
| July 27 THURSDAY | Thermodynamics | 18 |
| July 31 MONDAY | Thermodynamics | 18 |
| August 1 TUESDAY | Electrochemistry | 19 |
| August 2 WEDNESDAY | Electrochemistry | 19 |
| **August 3** **THURSDAY** | **FINAL EXAM THUSDAY (Ch. 16-20)** | 20 |