

# Chemistry 134 – Introduction to Chemistry- Fall 2021

**Course Number:** 01:160:134

**Section:** 01-03

**Course Portal:** Canvas: <https://canvas.rutgers.edu/>

## COURSE DESCRIPTION AND LEARNING GOALS

This course is especially for those who plan to study science in college but are not ready to undertake General Chemistry. Chemistry 134 is designed to strengthen your background in chemistry, your problem-solving ability, and your quantitative reasoning skills. We will review algebra and logic as applied to chemistry problems. We will prepare you to successfully meet the challenge of Chemistry 161 in the spring semester.

## MATERIALS REQUIRED

- *Introductory Chemistry*, 6<sup>th</sup> Edition, by Nivaldo J. Tro, Pearson, 2018. The primary course text - Lectures will follow the sequence of topics.
- *Non-programmable scientific calculator* (exponentials, powers, roots, logarithms, etc.).

## COURSE COORDINATOR AND LECTURER

Dr. Manese Rabeony. Wright Rieman Lab Room 370, Tel: 884-445-8609; e-mail: [rabeony@chem.rutgers.edu](mailto:rabeony@chem.rutgers.edu)

## CLASSROOM MANAGEMENT

We will be using Canvas (<https://canvas.rutgers.edu>) as a classroom management. You should check this site regularly. If you check it now, you will find a number of documents posted. If you are registered and a Rutgers Student, you will automatically be a “member” of the online class. You will need your NetID to login. During the course many additional documents will be posted on the web site including lecture notes, practice exams, and useful information or explanations about important topics.

We will routinely use Canvas to post announcements. You must adjust Canvas settings to make sure that these announcements will automatically be sent to you by Rutgers email. Click on **account** tab (upper left) then click on **notifications**. Look at the “announcement” line in the Course Activity chart and in the “email address” click on the left side to be sure there’s a green checkmark. This green checkmark on the left side means that all announcements will be immediately sent to you by Rutgers email.

Lecture notes will be available on Canvas.

## LECTURES

There are two 90-minute lectures per week, Monday and Wednesday 1:00 pm–2:20 pm. All lectures will be delivered synchronously on Zoom. The "Course Schedule" lists the topics to be covered during each lecture. We highly recommend that you do the relevant reading in the text before lecture; this practice will greatly enhance your ability to absorb the concepts introduced and follow the problems being solved. You are responsible for all material discussed in lecture whether or not it is also covered in the book. You are also responsible for announcements made in lecture. If you must miss class due to illness or personal emergency, please contact a fellow student for handouts, notes, and assignments.

## RECITATION

You are required to attend one 80-minute recitation per week. You must attend the section for which you are registered in order to receive credit.

SECTION	DATE/TIME	LOCATION
01	Th 11:00am-12:20 pm	HCK 112
02	Tu 1:00 pm- 2:20 pm	HCK 112
03	F 11am-12:20 pm	HCK-130

Recitation will allow you to interact with a member of the instructional staff in a small group setting. The class will focus on problem-solving; the instructor will go over homework problems in depth and will also reinforce concepts and skills by introducing new problems. Recitation is the time for you to ask questions; questions that will occur to you only if you have put forth your best effort on each week's material before class. Furthermore, preparation for and participation in class will obviously affect your instructor's evaluation of you. If your course grade lies at a borderline at the end of the semester, a positive evaluation may make the difference between one letter grade and the next. (For details, see "GRADING" below).

## **COURSE SCHEDULE AND PRACTICE PROBLEMS**

The "Course Schedule" describes what sections of the textbook are to be covered in each lecture. There is a set of suggested textbook problems associated with each lecture found in the course schedule. These problems are not graded, but doing the problems is important to reinforce your understanding of the material. These suggested problems illustrate the types of problem-solving skills that you will see on the exams. Most of the suggested problems are odd-number problems, for which there is an answer in the back of the textbook. Generally, the more problems you do, the better your understanding of the course concepts. You should feel free to ask any recitation instructor or lecturer about any of these problems. Additionally, more practice problems can be found on Canvas under "Review Problems" in the Course Information

## **HOMEWORK**

Please keep up with the material by studying the text, the lecture notes and by doing the homework problems listed in the courses. When doing problems, use the study guide only as a last resort. If you had to use the study guide to solve a problem, go back to that problem in a couple of days and try to solve it on your own. Use the recitation section to enhance your level of understanding. There will be homework review problems posted on the course website that you are highly encouraged to work on. The answers for these problems will be discussed in recitation section.

## **ONLINE HOMEWORK**

Part of your grade is determined by online homework that will be assigned every week - with the exception of the exam weeks - and due every Sunday at 11:59 pm. Individual extension cannot be granted.

## **QUIZZES**

There will be eight quizzes during recitations accounting for a total of 160 points towards the cumulative point score. All quizzes will emphasize the material as listed on the course schedule. Sharing of calculators during quizzes is forbidden. If you miss or anticipate missing a recitation quiz for a legitimate reason (a reason acceptable to your recitation instructor), you must try to make up the quiz during another recitation section meeting that same day. If this is not at all possible, contact your recitation instructor for make-up or credit within three days of the missed quiz date. Please note that if you haven't spoken with your recitation instructor within three days of a missed quiz you may not receive any credit at all. All quizzes will be counted towards your grade. None will be dropped and an absence counts as zero. A make-up quiz grade will be credited towards your course grade only if pre-approval has been obtained from your recitation instructor. **DO NOT ASK THE LECTURER FOR PERMISSION TO MAKE UP A QUIZ!** The permission to make up quizzes is entirely at the discretion of the recitation instructors.

## **EXAMINATIONS**

There will be two hourly examinations. The first will be held during lecture and the second during the University common hour exam period assigned to Chemistry 133. The final will be held during the Chemistry group exam time, as shown in the Course Catalog.

EXAM	DATE	TIME	LOCATION
Exam 1	Sunday October 10	6:00 pm– 7:20 pm	TBA
Midterm	Sunday November 7	6:00 pm– 7:20 pm	TBA
Final	TBA	TBA	TBA

Bring to each exam a scientific calculator, photo ID, and at least two #2 pencils with erasers. Sharing calculators is not permitted.

In accordance with University policy, the following situations, and only the following, constitute official conflicts with an exam.

1. You are registered for another course that meets at the time of the exam.
2. You have another common hour exam scheduled at the same time.
3. You must attend athletic practice required by a coach.
4. You are observing a religious holiday.

If you have an official conflict with an hourly exam, please submit:

- (1) The Conflict Request Form
- (2) The Required documentation

Deadlines for submission of conflict requests: Midterm: Nov. 4

We will not honor requests submitted after the above deadlines or without documentation.

If you have a conflict with an hourly, you will be scheduled for testing at another time during the day of the exam, possibly late in the evening. A list of approved students will be posted on the course website.

If you miss an examination for unforeseeable medical reasons, contact Dr. Rabeony as soon as possible. No medical excuse will be considered unless written supporting documents are provided. There are normally no make-ups for missed hourly exams. Your final exam will be weighted more heavily to substitute for the missing grade, assuming that your documentation is acceptable. An unexcused absence will count as zero.

Conflict policy for the final exam will follow University policy. Vacation plans will not be considered a conflict under any circumstances, so please arrange your travel accordingly. Submit conflict requests by Mon. Dec. 7. If you miss the final due to an official conflict or verifiable illness, you must make up the exam. A make-up will be held during the January winter break.

## **GRADING**

There are a total of 600 points which can be accumulated in this course, distributed as follows:

	<b>Points</b>
Exam I	100
Midterm	100
Quizzes	160
Homework	40
Final	200
Total	600

**POSTING OF SCORES.** All scores will be posted on Canvas.

## **LETTER GRADES**

There are no grade curves in the class – grades are assigned based on the overall percentage score according to a final scale to be decided at the end of the course. An approximate idea of the grading scale would be as follows:

A ( $\geq 90\%$ ); B (80-89%); C (65-79%); D (55-64%); F ( $< 55\%$ ).

Missing more than one midterm for any reason (excused or unexcused), missing the final exam, a grade of  $< 35\%$  on the final exam, or breach of academic integrity will result in an automatic F for a final grade.

## **DISABILITY SERVICES**

Disability Services provides student-centered and student-inclusive programming in compliance with the Americans with Disabilities Act of 1990, the Americans with Disabilities Act Amendments of 2008, Section 504 of the Rehabilitation Act of 1973, Section 508 of the Rehabilitation Act of 1998, and the New Jersey Law against Discrimination. For any student who has been deemed eligible for special services, Rutgers provides accommodations and/or modifications in order to ensure that all students have an equal opportunity to participate in all Rutgers

programs, services, and activities. Accommodations may include extended testing time, assigned note-takers, recorders, etc. For more information, please refer to the Rutgers Office of Disability Services. Please note that students must try to present documentation of any accommodations as soon as possible, before the day of an exam.

## COMPUTER SYSTEMS AND INTERNET CONNECTIONS

Because the lectures are held online, technical issues from the student's side (e.g., poor internet connections, using a wireless connection, using a smartphone instead of a desktop or laptop computer, using an incompatible browser) may potentially arise during the session that may unintentionally disrupt the session. **It is imperative that you make sure that your computer systems and internet connections are dependable.** The Canvas Help Desk will be on hand to ensure that every student has the best possible lecture experience and will gladly work with students to make sure that their computer system will allow them to attend/fully participate in lecture. **However, it is ultimately your responsibility to ensure that the computer and/or internet connection used for lecture are reliable.**

## ACADEMIC INTEGRITY

You are responsible for your own grade. While interaction between students is allowed, any evidence of cheating on homework, quizzes, or examinations is taken very seriously and will be handled on a case-by-case basis. Consequences may include receiving no credit for the assignment, notification of the appropriate dean, academic probation, suspension, or expulsion from the university. Any record of academic integrity violations can seriously impact your future goals, including graduate or professional school, your ability to be certified/licensed for certain professions, and your career. If you notice any evidence of others cheating, you owe it to yourself and your fellow classmates to report it. We will handle such cases with the strictest of confidence and anonymity.

## INTELLECTUAL PROPERTY

The material for this course is copyrighted and may not be posted on any other web site without permission. This includes lecture slides, videos, and any other documents posted on the general chemistry website or on Sakai. These resources are for your use only. Additionally, recitations are not to be recorded in any manner, including screen shots, and thus may not be posted anywhere. Any violation of this policy will be treated as an academic integrity violation and may invoke legal action if necessary

## SUCCESS IN CHEMISTRY

There are no magic formulas or advice that guarantee good grades. Chemistry is a physical science, meaning that there are many quantitative problems and concepts. Therefore, competency in algebra is expected in order to be successful. However, it's not simply the mechanics of solving algebraic equations that is required. It's the setup—understanding the chemical principles and concepts—that often troubles students. Chemical questions involve applying these principles in the correct mathematical context—similar to word problems in algebra classes. Chemistry is a cumulative discipline. This means that the principles learned in the beginning of the class are used in future areas—the subject builds on an increasingly broad foundation. If you don't understand the foundation, the course will become increasingly difficult to manage

**Common student remark:** "I've spent hours reading each chapter of the book, and still get a low grade."

**Response:** Good studying does not mean just reading and memorizing. Good study habits mean reading and applying. You must strive to understand the underlying principles and concepts. Then the application of the mathematical equations will come naturally. You can't learn to do problems by just reading the book. You have to actually do the problems yourself.

**Common student remark:** "I've done the homework problems and still get a low grade."

**Response:** Have you really done the problems, or watched someone else do them? Just reading a solutions manual, or having someone explain a problem, is not the same as actually solving problems. There are no shortcuts—you learn to solve problems by actually doing them. You should take a critical approach to problem-solving. It's not just memorizing step-by-step recipes for solving a particular problem, but understanding the principles on which that problem is based, so that when any similar problem occurs on a test, you can apply these concepts successfully.

## **EXTRA HELP**

The instructional staff of Chemistry 134 is committed to helping you succeed. If you have any questions, do not hesitate to come to office hours, stay after class, or send e-mail. The Learning Resource Center will be providing tutoring as well as help with learning strategies. We urge you to explore these avenues.

