

WORLD OF CHEMISTRY 101 FALL 2021 21:160:101:03259**Instructor: Dr. Karen Chaffee Office: Room 310 Olson**

Meets M 2:30-3:50PM W 1:00-2:20PM Smith 220

e-mail: kchaffee@newark.rutgers.edu phone 973-353-5460 (but don't call, email!)**Tentative Office hours (310 Olson): TBA**

This course is designed for those students not majoring in a science. This course will help students understand the basic quantitative, qualitative and theoretical aspects of chemistry, plus applications to everyday life. It is designed for those students not majoring in a science. Please check with your adviser if you are a science major; it may not count toward your degree.

Webpage: We will use Canvas:

FOR HELP See me during office hours, or make an appointment to see me at times other than office hours.

Text: Chem 2, 2nd Edition by Hogg. OWL is Not required.

Tentative schedule, we may get a little ahead or behind

| Date | Chap | Topic |
|-------------|----------------------------------|--|
| 9/1-8 | 2.1-5, 3.2b-8 | atoms, protons, neutrons electrons |
| 9/13-15 | 2.1-5, 3.2b-8 | electron configuration, periodic table |
| 9/20-9/27 | 5 | ionic and covalent compounds |
| 9/29 | 5, 8 | naming, the states of matter, chemical equations, moles, review |
| 10/4 | | EXAM 1 |
| 10/6- 10/13 | 8 | chemical equations, moles, energy, reactions, |
| 10/18 | 8 | thermodynamics |
| 10/20-10/25 | 9 | acid base |
| 10/27-11/1 | | Introduction to nuclear reactions, radioactivity, half life , nuclear fission, |
| 11/3 | | EXAM 2 |
| 11/8-10 | 13, 12 | nuclear power plants, nuclear weapons, begin chapter 12 |
| 11/15-22 | Selected from 12.1,2, 3, 4, 6, 7 | organic chemistry, petroleum, energy from petroleum, start chapter 14 |
| 11/29, 12/1 | Selected from 14.1-4 | organic chemistry, alcohols, carboxylic acids, esters, polymers, begin chapter 15 DNA |
| 12/6 | | EXAM 3 |
| 12/9-13 | 15, 16, 17 Selected topics | chemistry of life, nutrition, drugs review (and selected topics including cloning, genetic engineering, and drugs, and other topics if we have time!) |

Final Monday 12/20. 3:00 - 6:00 pm

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Attendance is part of grade. Attendance score = 12 - (number of lectures missed), but the score will not be less than zero nor greater than 10. For example, if you miss 5 lectures, your score will be $12 - 5 = 7$ (out of 10). Attendance counts as 10% of your grade!

The grade is based on exams and attendance. Grading:

E1: 20 points

E2: 20 points

E3: 18 points

Final: 32

Attendance: 10

Total: 100 points

To avoid any need for make-up exams, the score on the final exam (as a percentage) can be used to replace the lowest score of any of the three 80-minute exams (or an exam missed for any reason).

No bathroom breaks during exams unless you speak to me before you get your exam paper. No cell phones or electronic devices during exams. You cannot leave the exam room for the first 30 minutes after we start; you cannot start the exam after people have started to leave.

OWL Quizzes (that come with new textbooks) are not required. I won't set OWL up because I will have online quizzes you may do, but they are not required.

END of CHAPTER Homework. This is not collected. Here are suggested problems:

Chapter 3 : 9, 10, 14, 15, 17, 19, 21, 23, 25, 27, 30, 31, 33, 35, 45, 51, 53, 55, 56, 57

Chapter 5 1, 9, 11, 13a,b,e, 19a,b,e,f, 25a, c, e, f, h,

Chapter 8: 1, 4, 15, 19, 21, 23, 24, 33, 48, 49, 52,

Chapter 9: 1, 2, 6, 7, 11, 13, 16a, 18, 19, 20, 21, 22,

Chapter 13: 3, 5, 7, 13, 30, 33, 34, 36, 41, 42--45 47, 50

Chapter 12: 1,2,4,6a,b, 13 a,b,c,d (in 13, just answer, are they the same or different?)

Chapter 14: 3b, d, e, f 9, 12, 19, 20, 26, 36 b and c, 40a,b,c,f 42,

Chapter 15: 9 a and c, 12, 13, 15, 23, 24, 25, 26, 27 a,b,d, 28, 31, 32

As an academic community dedicated to the creation, dissemination, and application of knowledge, Rutgers University is committed to fostering an intellectual and ethical environment based on the principles of academic integrity. Academic integrity is essential to the success of the University's educational and research missions, and violations of academic integrity constitute serious offenses against the entire academic community. The entire Academic Integrity Policy can be found here: <http://academicintegrity.rutgers.edu/academic-integrity-policy/>

Responsible behavior and commitment:

1. **Absences:** Per the University's Course Attendance policy (10.2.7), students are responsible for communicating with their instructors regarding absences. The

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Division of Student Affairs is available to verify extended absences: (973) 353-5063 or DeanofStudents@newark.rutgers.edu.

2. Regular attendance is the minimum demonstration of responsibility and commitment on your part. Therefore, **you are responsible to pick up handouts and returned exams/quizzes and to keep them**

3. **In case of inclement weather, students should find out on their own whether the University will be closed. (Although I will try to find out for you.)**

Scheduled exams will NOT be cancelled if the University does not cancel class.

4. All students must have a valid Rutgers (or Canvas) e-mail account. **Class-related information will be sent to students Rutgers e-mails. Students are responsible for checking their Rutgers e-mails so that important class-related information will not be missed.**

Accommodation and Support Statement

Rutgers University Newark (RU-N) is committed to the creation of an inclusive and safe learning environment for all students. RU-N has identified the following resources to further the mission of access and support:

- **Students with Disabilities:** Rutgers University welcomes students with disabilities into all of the University's educational programs. The Office of Disability Services (ODS) is responsible for the determination of appropriate accommodations for students who encounter barriers due to disability. In order to receive consideration for reasonable accommodations, a student with a disability must contact ODS, register, have an initial appointment, and provide documentation. Once a student has completed the ODS process (registration, initial appointment, and documentation submitted) and reasonable accommodations are determined to be necessary and appropriate, a Letter of Accommodation (LOA) will be provided to the student. The student must give the LOA to each course instructor, followed by a discussion with the instructor. This should be completed as early in the semester as possible as accommodations are not retroactive. More information can be found at ods.rutgers.edu. Contact ODS: (973) 353-5375 or ods@newark.rutgers.edu.
- **Religious Holiday Policy and Accommodations:** Students are advised to provide timely notification to instructors about necessary absences for religious observances and are responsible for making up the work or exams according to an agreed-upon schedule.

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- **Counseling Services:** Counseling Center Room 101, Blumenthal Hall, (973) 353-5805 or <http://counseling.newark.rutgers.edu/>.
- **Students with Temporary Conditions/Injuries:** Students experiencing a temporary condition or injury that is adversely affecting their ability to fully participate in their courses should submit a request for assistance at: <https://temporaryconditions.rutgers.edu>.
- **Students Who are Pregnant:** The Office of Title IX and ADA Compliance is available to assist students with any concerns or potential accommodations related to pregnancy: (973) 353-1906 or TitleIX@newark.rutgers.edu.
- **Gender or Sex-Based Discrimination or Harassment:** Students experiencing any form of gender or sex-based discrimination or harassment, including sexual assault, sexual harassment, relationship violence, or stalking, should know that help and support are available. To report an incident, contact the Office of Title IX and ADA Compliance: (973) 353-1906 or TitleIX@newark.rutgers.edu. To submit an incident report: tinyurl.com/RUNReportingForm. To speak with a staff member who is confidential and does **NOT** have a reporting responsibility, contact the Office for Violence Prevention and Victim Assistance: (973) 353-1918 or run.vpva@rutgers.edu.

Learning Resources:

- Rutgers Learning Center (tutoring services)
Room 140, Bradley Hall
(973) 353-5608
<https://sasn.rutgers.edu/student-support/tutoring-academic-support/learning-center>
- Writing Center (tutoring and writing workshops)
Room 126, Conklin Hall
(973) 353-5847
nwc@rutgers.edu
<https://sasn.rutgers.edu/student-support/tutoring-academic-support/writing-center>