WORLD OF CHEMISTRY LABORATORY
CHEM 110 Spring 2022  21:160:110

Course Instructor: Dr. Karen Chaffee  Email: kchaffee@newark.rutgers.edu
Office Room 310 Olson Hall  (Tel. 973-353-5460 but please email rather than call)
Lab Number: basement of Olson lab  Credits: 2 h 50 min laboratory, 1 credit
Tentative Office hours (310 Olson): (This can change based on student's needs
Wednesday 2:30 - 3:50  Friday 11:00 - 12:20

COURSE DESCRIPTION:
A basic chemistry laboratory course designed for non-science students. Students completing this
course will work safely in a chemistry laboratory and become skilled at working
with a variety of equipment, learn about what chemists do, use quantitative and creative thinking
and use scientific modes of inquiry.

REQUIRED MATERIAL
We will supply Goggles and simple calculators. We will supply printouts of labs. There is no
book. If you want nicer goggles or calculators, you may bring them.

COURSE POLICIES

1. Promptness: Laboratory session will begin and end promptly as scheduled; students will not
   be allowed to work overtime or during off-hours. If a student arrives late to lab, he or she
cannot stay longer than the latest student who came on time.

2. Attendance: Laboratory attendance is Mandatory. Students are expected to attend every
   laboratory session. Students are responsible for signing in if they are late.

3. Make-up Labs: We have a make-up lab if you miss one lab. Anyone may take it. If you miss
   more than one lab, you may need to work with me. For missed lab period (after the first one)
you need a valid excuse. Please ask me! Valid excuses include a medical reason, a religious
holiday, or valid school activities. Valid documentation must be provided. If you want to do
the lab in another section, you are responsible for contacting Dr. Chaffee in advance with your
schedule for the remainder of the lab week to find an open spot in other lab sections.

4. Cell Phones: Don’t use cell phones for entertainment purposes. They are useful for taking
   pictures.

5. Partners
   • Normally no more than two people may work together.
   • You are expected to work at your workstation with your equipment only.
   • You are expected to make your own measurements and observations.
• Do not bring in another person’s experiment or expected results. Enjoy the excitement of discovery.

6. In doing any experiment:
   • First thing, put your name and date on your data sheet.
   • Record all data directly on your data sheet in ink. Do not use pencil or “erasable” ink!
   • Your DATA SHEET (like a hospital chart or a research notebook) is a record we can use to help you.
   • Do not use scrap paper or write data on the palm of your hand! Write directly on your DATA SHEET. Otherwise, your information can get lost or smudged and give rise to errors in recopying and we won’t be able to help you as well.
   • Do not erase or whiteout on the DATA SHEET. To change data, cross out the erroneous data and replace it with the new data! Do not write over the old data. Write the corrected data next to or above the crossed out data. The old data should still be readable! You may indicate why you changed the data if you want.
   • We can’t help you if we don’t know exactly what you did--please save all your data.

7. DATA SHEETS and products are to be turned in before you leave the laboratory if it is that type of lab. If for any reason, you cannot turn in your results before you leave the lab, have your instructor note that on your DATA SHEET before you leave.

8. Grading: Your grade will come from experiments, both write-up and in-lab (which includes attendance and arriving on time.) The write-up for each experiment is worth 30 points. Your in-lab is 30 points. Quizzes (every three-four weeks or so) are worth 40 points. Typically, you can do reasonably well (B) if you attend and try your best. However, if you want a top grade (A or B+), you must also do well on quizzes. Most people do well and we work to make the class successful for you as long as you attend and try.

9. Weather Emergencies: Check the Rutgers website (www.rutgers.edu) to confirm if classes are cancelled due to weather emergencies in case of bad weather

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/
Tentative schedule

<table>
<thead>
<tr>
<th>WeekNo.</th>
<th>Experiment</th>
<th>Tuesday section</th>
<th>Thursday Section</th>
<th>Friday section</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Safety/Syllabus Metric review/ Distillation Lecture (REMOTE)</td>
<td>1/18</td>
<td>1/20</td>
<td>1/21</td>
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<tr>
<td>2</td>
<td>Distillation Lab (REMOTE)</td>
<td>1/25</td>
<td>1/27</td>
<td>1/28</td>
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<tr>
<td>3</td>
<td><strong>check in</strong> plus Graphing concentration and density</td>
<td>2/1</td>
<td>2/3</td>
<td>2/4</td>
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<tr>
<td>4</td>
<td>Calibrate and Physical Properties</td>
<td>2/8</td>
<td>2/10</td>
<td>2/11</td>
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<tr>
<td>5</td>
<td>Spinach, Separations <strong>Big Quiz 1</strong></td>
<td>2/15</td>
<td>2/17</td>
<td>2/18</td>
</tr>
<tr>
<td>6</td>
<td>THE SPECTROPHOTOMETRIC ANALYSIS OF ASPIRIN.</td>
<td>2/22</td>
<td>2/24</td>
<td>2/25</td>
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<tr>
<td>7</td>
<td>Extraction of Caffeine</td>
<td>3/1</td>
<td>3/3</td>
<td>3/4</td>
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<tr>
<td>8</td>
<td>Vinegar Analysis</td>
<td>3/8</td>
<td>3/10</td>
<td>3/11</td>
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<td></td>
<td>Spring Break</td>
<td>3/14-3/18</td>
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<tr>
<td>9</td>
<td>Polymers <strong>Big Quiz 2</strong></td>
<td>3/22</td>
<td>3/24</td>
<td>3/25</td>
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<tr>
<td>10</td>
<td>Aspirin Synthesis</td>
<td>3/29</td>
<td>3/31</td>
<td>4/1</td>
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<tr>
<td>11</td>
<td>Preparation of Soap</td>
<td>4/5</td>
<td>4/7</td>
<td>4/8</td>
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<tr>
<td>12</td>
<td>Isolation of Lactose and Casein from Milk</td>
<td>4/12</td>
<td>4/14</td>
<td>4/15</td>
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<tr>
<td>13</td>
<td>Make up week</td>
<td>4/19</td>
<td>4/21</td>
<td>4/22</td>
</tr>
<tr>
<td>14</td>
<td>Quiz, finish lab 12 and Checkout and <strong>Big Quiz 3</strong></td>
<td>4/26</td>
<td>4/28</td>
<td>4/29</td>
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</tbody>
</table>

* This can be changed if we have unanticipated circumstance
Absences: Per the University’s Course Attendance policy (10.2.7), students are responsible for communicating with their instructors regarding absences. The Division of Student Affairs is available to verify extended absences: (973) 353-5063 or DeanofStudents@newark.rutgers.edu.

Academic Integrity (The following statement is recommended for inclusion on all syllabi.):

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/

Accommodation and Support Statement (The following statement and information is recommended for inclusion on all syllabi.):

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. The Division of Student Affairs is available to verify absences for religious observance, as needed: (973) 353-5063 or DeanofStudents@newark.rutgers.edu.

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