New York University  
General Chemistry-UA-125  
Blended and On-line Labs  
151 Brown Building  
Professor Richard Orr  
ro26@nyu.edu

Office Hours (1 hour - zoom): Monday 4pm, Tuesday 4pm, and by Appointment  
Office Location: 4th Floor Waverly Building Clinical Suite

Professor Acknowledgements  
I reserve all rights to change any of the contents within the syllabus with advanced notice, if I feel any changes become necessary during the semester.

Course Requirements  
This course is the laboratory part of the first semester General Chemistry-UA-125 and is support of the lecture for the course. It is required to take it concurrently. Generally, this is a lab course, although this semester we will have both a blended and an online organization.

Learning Objectives  
To understand the nature of the general chemistry lab, and the application of chemical concepts to experimental setups and to learn how to work in a chemical lab structure.

Lab Days, Times, and Sections  
♦ Thursday 2:30pm-6:45pm  
  Sections 201-206, 220, 221, 223  

♦ Friday 9:30am-1:45pm  
  Sections 207-213

Experiments  
Posted on NYU Classes as lab manuals under the laboratory tab, and resources tab. Study this material and prepare for the both the pre-lab quiz and the lab experiment (exercise)

Virtual Labs (Location MH Connect)  
The Online students will be watching videos and working through the Virtual Labs within MH Connect. This is done through my MH Connect course site, and NOT Dr. M's.

Significant Figures  
We will follow significant rules used by Dr. M. All numerical calculations need to be reported to the proper number of significant figures with units.

Pre-Lab quizzes and Final Exam  
I will be using McGraw Hill Connect for the written pre-laboratory quizzes due the night before by 11:59pm your lab is scheduled. The pre-lab quizzes (quizzes) will be randomized questions from a question pool I create using McGraw Hill. The same for the written Final Exam.

Each quiz is worth 30-points and will be normalized or scaled to 30% of your combined lab score. It will be available the day before your registered lab day is scheduled. It will be available between 12:00pm (noon) -
11:59pm. You will have to complete the quiz once you begin. It will no longer be available at 11:59:01pm Wednesday (Thursday Lab) or Thursday (Friday Lab) night based on your lab schedule.

**Lab Reports**
Experimental lab reports will be uploaded to Gradescope for grading and will have a deadline for submission 24 hours from the beginning of lab. This includes the lab exercise, notebook, prelab and post lab questions.

**Lab Notebook**
A hand-written summary of the lab exercise, adobe scanned, and uploaded 1 hour before lab begins

**Course Description**
The lab portion of the course is a companion to the lecture and recitations. In particular, it should provide laboratory exercises at the chemical bench. Because of covid-19 requirements, the lab is formed as Blended and Online.

The organization includes 12 labs for the blended with 6 of them on campus and the other 6 virtual. The same 12 labs will be provided for the online but as virtual lab experiments using McGraw Hill Connect Virtual Labs, and some NYU chemistry lab videos. The registration and login information for the lab course is given below.

The course will be held each **Thursday afternoon 2:30pm, and Friday morning 9:30am, both in 151 Brown Building.** There will be **NO In-lab quizzes** since we will have taken it the night before each lab day.

**Blended Sections**
If you are expecting to work in the general chemistry lab, you will need to have the following items. This is the list of mandatory Personal Protection Equipment or PPE's for this semester Spring 2021.

- Gloves
- Disposable Laboratory Jacket
- Face mask
- Goggles
- Duplicate Laboratory Notebook (Order Online through NYU Bookstore)
  - NYU Daily Scanner: Pass (Required to enter the building)

Each student will maintain the proper social distance when possible. You can communicate with each other, and will have one partner available to you, but you need to try and maintain social distancing requirements.

While in the lab, each student must wear a face mask, goggles, gloves, and laboratory jacket.

A new facemask will be provided each week when you enter the laboratory.

**Purchases from the Lab stock room (151 Brown Building)**
- Box of Gloves
- Goggles
- Disposable Jackets
  - Spartan Software (See Link Below)

**Online Sections**
- Remote through Zoom
- Duplicate Lab Notebook - Purchase from the NYU bookstore (See below)
  - Spartan Software
- No PPE's for Online Remote students
NYU Classes
We will be using NYU classes for many aspects of our course laboratory organization. Lab exercises (manuals), and videos located in the Laboratories folder, or Resources folder.

Gradescope, and NYU Classes Assignment Tab
We will use Gradescope, and sometimes the Assignments tab in NYU classes to upload laboratory experiment assignments as PDF files, or NYU documents as necessary.

My roster will be uploaded into Gradescope, and your name should be on the list. Please verify your name is in Gradescope. If your name is not in Gradescope, then please use the following code:

code: D5PV7N

https://www.gradescope.com/courses/230178

McGraw Hill Connect
We will use this software to take our quizzes and final exam. The assessment will be graded and recorded within the McGraw Hill Connect site.

You will need to follow the link to my site and register for the resources. These include the Virtual Labs we will be using. You can begin registering using this link on February 27th, 2021.

https://connect.mheducation.com/class/rorr-spring-2021-lab

Zoom
In addition, we will be using Zoom from both, the general course tab genchem001 from within NYU Classes, and your laboratory instructors section Zoom, also from within NYU Classes. You need to launch ZOOM from within NYU Classes. Each lab section will be meeting with their instructor on your TA's scheduled Zoom link each week for lab.

Lab Notebook Required (NYU Bookstore - Order Online through the)
ISBN: 9781930882744
Author: Hayden
Publisher: Hayden-McNeil Publishing
Formats: Spiral

Course Policies

Attendance
Laboratory attendance is required. Missing a lab will result in a zero for the lab exercise, although you may still get credit for taking the quiz the day before your lab is scheduled. No unexcused absences will be accepted, and all absences must be accompanied by a legitimate paper excuse (Medical note, etc.), and coversheet. The two must be sent to me directly, and not your TA. A coversheet will be available in NYU Classes.

Academic Integrity
In this course we will follow all university policies on academic integrity - no exceptions. Poor academic integrity will be dealt with through the proper channels. If you are involved in academic misconduct, it will be forwarded to the Dean of the College of Arts and Science. Currently, remote test taking has increased in dishonest behavior using online platforms, such as Chegg. Although the appeal is to search for test questions, the consequences may be expulsion from the university. Do not use online resources, such as Chegg unless the instructor provides links to them for you to use.

https://cas.nyu.edu/content/nyu-as/cas/academic-integrity.html)
No Makeups
There will be no allowed laboratory makeups and only university excused absences will be accepted. You will need to submit to me directly the excused absence, such as a doctor’s note.

No makeup quizzes. A missed quiz is a zero, unless excused. Excuses are defined by the University - Religious observances, scheduled University events, and illness.

No makeup experiments
There are 12 experiments. Each experiment includes the actual laboratory experimental workup, a lab quiz, Prelab and Post-lab question set. The total score for each experiment is worth 100 points. The contribution for the Experiment, Pre-lab, and Post-lab is 90 points. The lab quiz is worth 10 points.

Lab Quiz (MH Connect)
There will be a lab quiz for each experiment, and it will include general laboratory information provided in the lab manuals. Each quiz is worth 30 points of the 100 points for each lab exercise, or 30% of the experiment grade, and you will be given 2 hours to complete it. Once you begin the quiz, you must complete it since it is timed. The quizzes are given through MH Connect (See Link Below) NO MAKEUPS.

Pre-Lab and Post Lab Questions
Each experiment will involve answering several pre-lab and post-lab questions. Their point values are included as part of the 70 points for each lab exercise.

Final Exam - A missed final exam will need to be taken in the spring semester and will give you an incomplete for the semester. The final exam will be worth 100 points or a score normalized to 100 points.

Disability Disclosure Statement:
Academic accommodations are available for students with disabilities. The Moses Center website is www.nyu.edu/csd. Please contact the Moses Center for Student Accessibility (212-998-4980 or mosescsd@nyu.edu) for further information. Students who are requesting academic accommodations are advised to reach out to the Moses Center as early as possible in the semester for assistance.

Course Score
The lab course will provide 25% towards your General Chemistry course grade or 100 points towards the total of 400 points on Dr. M’s syllabus. You do not earn a letter grade in the lab course, only a percentage score.

**Percentage of Lab Score**

<table>
<thead>
<tr>
<th></th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>Experiments, Pre-Lab, Post-Lab</td>
<td>70%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>30%</td>
</tr>
<tr>
<td>Experiments 12</td>
<td>100 pts ea.</td>
</tr>
<tr>
<td>Final Exam (Written through MH Connect)</td>
<td>100 points (scaled)</td>
</tr>
<tr>
<td>Lab Total Points</td>
<td>1300</td>
</tr>
</tbody>
</table>
## Course Lab Schedule

<table>
<thead>
<tr>
<th>Dates</th>
<th>Experiment</th>
<th>Experiment Title</th>
<th>Blended A Thursday/Friday</th>
<th>Blended B Thursday</th>
<th>On-Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan 28, 29</td>
<td>No Lab</td>
<td>No Lab</td>
<td>Zoom</td>
<td>Zoom</td>
<td>Zoom</td>
</tr>
<tr>
<td>Feb 4, 5</td>
<td>Exp 1</td>
<td>Data Analysis</td>
<td>D</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Feb 11, 12</td>
<td>Exp 2</td>
<td>Density of Solid and Liquid</td>
<td>W</td>
<td>Exp3 (D)</td>
<td>D</td>
</tr>
<tr>
<td>Feb 25, 26</td>
<td>Exp 3</td>
<td>Nomenclature</td>
<td>D</td>
<td>Exp2 (W)</td>
<td>D</td>
</tr>
<tr>
<td>March 4, 5</td>
<td>Exp 4</td>
<td>Fractional Crystallization</td>
<td>W</td>
<td>Exp5 (D)</td>
<td>D</td>
</tr>
<tr>
<td>March 11, 12</td>
<td>Exp 5</td>
<td>Acid - Base Stoichiometry</td>
<td>D</td>
<td>Exp4 (W)</td>
<td>D</td>
</tr>
<tr>
<td>March 25, 26</td>
<td>Exp 6</td>
<td>Back Titration</td>
<td>W</td>
<td>Exp7 (D)</td>
<td>D</td>
</tr>
<tr>
<td>April 1, 2</td>
<td>Exp 7</td>
<td>Reactions in Solutions and Qualitative Analysis</td>
<td>D</td>
<td>Exp6 (W)</td>
<td>D</td>
</tr>
<tr>
<td>April 8, 9</td>
<td>Exp 8</td>
<td>Determination of Ideal Gas Constant</td>
<td>W</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>April 15, 16</td>
<td>Exp 9</td>
<td>Calorimetry</td>
<td>W</td>
<td>Exp10 (D)</td>
<td>D</td>
</tr>
<tr>
<td>April 22, 23</td>
<td>Exp 10</td>
<td>Periodic Trend</td>
<td>D</td>
<td>Exp9 (W)</td>
<td>D</td>
</tr>
<tr>
<td>April 29, 30</td>
<td>Exp 11</td>
<td>Spartan: Molecular Geometry</td>
<td>D</td>
<td>Exp12 (W)</td>
<td>D</td>
</tr>
<tr>
<td>May 6, 7</td>
<td>Exp 12</td>
<td>Beer’s Law</td>
<td>W</td>
<td>Exp11 (D)</td>
<td>D</td>
</tr>
<tr>
<td>May 12-18</td>
<td>Final Exam (TBD)</td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

W - Wet Lab  
D - Dry Lab

## Course Software Required and Their Links

We will be using Logger Pro and Spartan software, and so everyone will need to download them from their links below. We may not use any of the other software, but ChemDraw is used in more advanced chemistry courses and the link is available below.

### Logger Pro

Located within NYU Classes under the laboratory tab for General Chemistry-UA-125-001. You will need to install logger pro, so please use the latest version for your system. There are only two versions available. For the Mac and Windows OS. There is no version for the Chrome OS. So, you cannot use the Chrome OS with Logger Pro.

### Spartan Software

We will be using Spartan software to calculate the Molecular Orbital Energy levels for a variety of different chemical substances to determine their energies. You do not need to purchase the Spartan Software.

The first link below is available for you as an online IT service from NYU VCL (Virtual Computer Lab). You must be continuously connected to the internet to use the software. Notice this link forces you to log into the system. You will need to use your NYU Net ID login information.

Use the following links for Spartan, and other software offered through the Virtual Computing Lab (VCL)

Follow this link for the NYU VCL Login Portal for Spartan Software (Use your NYU login information)  
[https://nyu.apporto.com/](https://nyu.apporto.com/)

Adobe Scan for iPhone or Android (Download)
Required to upload files in PDF format from your phone

*********************************** NOT Required but available ***********************************

ChemDraw
This link takes you to the NYU library site where ChemDraw information can be found. Please follow the instructions on this page to download ChemDraw. You will need to register for the software. It is free for students to use during the semester. The second link is the form you will need to fill out at Perkin Elmer. Use the account ID provided (Account ID = 3088SL).
https://guides.nyu.edu/c.php?g=276594&p=1844910


Excel
If you do not have Excel on your computer, you may use the one found at NYU VCL

Follow this link and click on previous VCL link within the document paragraph. It will take you to the login portal for the VCL software available to use as students.


Use this link if you need help from IT with VCL
https://nyu.service-now.com/servicelink/kb_search.do?id=041213019263437

This link takes you to the IT software page "location web page" for VCL.
https://www.nyu.edu/life/information-technology/getting-started/software/software-by-nyu-it-location.html

If you want a Spartan desktop version of your own, you can purchase the software at the following link:
https://store.wavefun.com/product_p/spstudent.htm

Adobe Acrobat Software for Students (Download)
https://nyu.service-now.com/servicelink/kb_search.do?id=KB0018090