I. Course Materials


There are also two copies on reserve at the Bobst library, but are subject to availability (Accessibility of these copies within 36 hours before your assignment due date may be limited and this is not a valid excuse for not completing an assignment by the due date). Plan ahead.

ii) Required Notebook: *Student Lab Notebook, Organic Chemistry, 100 Carbonless Duplicate Sets*, Hayden McNeil*

iii) Required Laboratory Equipment (commonly referred to as Personal Protective Equipment, or PPE):

- Laboratory safety goggles ($5.50 for standard goggles, or $13.70 for fog resistant goggles)*
- Laboratory coat semester rental ($18)*
- Nitrile Gloves ($14.20)*

*May be purchased at the stockroom, located in the organic teaching laboratory. Stockroom purchases may be made during your laboratory session using ONLY NYU Campus Cash.
II. Course Description
This course is intended to introduce you to important concepts and techniques in Organic Chemistry through laboratory experiments. The Organic Chemistry I Laboratory course will provide training in the techniques of the organic chemistry laboratory, such as carrying out chemical reactions and purification of chemical mixtures. Purification methods such as recrystallization, extraction, distillation, and chromatography will be utilized. Chemical identification and purity will be determined by analyzing data from methods such as chemical tests, thin-layer chromatography (TLC), gas chromatography (GC) with a Flame Ionization Detector (FID), mass spectrometry (MS), nuclear magnetic resonance (NMR) spectroscopy, and infrared (IR) spectroscopy. Expanding your knowledge base and critical thinking skills will help you to prepare for a wide array of potential future challenges, including upper level courses, medical school, and independent research.

The modes of learning, activities, and course structure are subject to change as deemed appropriate by the Instructor of Record, or as directed by the University.

III. Contacts and Interactions

III-i. Email Communications for Specialized Inquiries
You will have the opportunity to interact with the section instructor and course Instructor of Record in person on a regular basis in the laboratory; use these opportunities to get answers to your questions when possible. If you must email, your primary contact is your laboratory section instructor. All inquiries regarding grading, policies, absences, and any other issue should begin by contacting your section instructor and they will answer your e-mail within a 48-hour period.

ALL email correspondences for this course MUST begin with a list of the following:
1) Your Name
2) Section #
3) Laboratory Section Day and Time
4) Lab Section Instructor

Also, include the word “organic” (not “orgo,” not “chem lab,” etc.) somewhere in your subject line. Additional descriptive words in the subject line may be included, but the specific word “organic” will be used to retrieve potentially missed course emails.

The course Instructor of Record (Professor Henssler, henssler@nyu.edu) should only be contacted via email after you have email verification that your section instructor has ruled on the matter. Students wishing to meet with the course instructor must provide information regarding prior discussions with their section instructor and explain why the section instructor’s ruling is unsatisfactory. When contacting the course instructor via email, you MUST include (1) ALL of the identification information described above AND (2) the correspondence(s) with your section instructor. If all or parts of this are missing, the course instructor may not reply to your e-mail.

III-ii. Instructor Office Hours
Instructor office hours are posted on the NYU Brightspace website. You may attend all instructors’ office hours, not only the Instructor of your laboratory section. Also use extra laboratory time to ask questions and discuss course materials with the instructors. Also, the University Learning Center (ULC) offers free peer tutoring.
**III-iii. General Comments on Contacts and Interactions**
Office hours, meetings with instructors, and e-mail/NYU Brightspace communications are limited to the workweek. No correspondence of any type should be expected from any Instructor on weekends and university holidays. If you follow the instructions above but do not receive an instructor response to your inquiry via email or NYU Brightspace within what you consider to be a reasonable amount of time, please resend the email including the original message.

**IV. Laboratory Safety Policies and Procedures**
The safety of all occupants of the laboratory is our highest priority. For the laboratory to be a safe environment, all students will be required to follow procedures, policies, and hazards associated with each experiment, and laboratory work in general. All students must carefully read the CHEM-UA 225 Laboratory Safety Policies and Procedures document posted on NYU Brightspace. All students will be required to acknowledge that they read this document and understand the content therein. If you have any questions or concerns they should be directed to the laboratory Instructor of Record. Violations of safety considerations or policies in the Syllabus or Laboratory Safety Policies and Procedures document will result in course grade consequences, and may result in removal from the laboratory session or the course. Further, information in the aforementioned document may be the basis of questions for future laboratory assessments such as quizzes.

**V. Attendance (and in case of absence) and Tardiness**
You must complete at least 7 of the laboratory experiments and associated work (assigned report or postlab assignment) as well as the final exam in order to be eligible to receive a passing grade for the course (read the rest of this section). For logistical reasons, it is not possible to offer make-up laboratory sessions. Therefore, there will be no makeup laboratory sessions for any reason, regardless of whether the absence was within or beyond your control.* There are no excused absences.* For this reason ALL of your experiments are not counted, and instead n-1 of your weekly combined experiment scores count toward the final grade--- where “n” is the number of experiments offered to your section, NOT the number of experiments that you personally completed if those numbers are different (see further details below in Section VI. Grading and Other Requirements). If you miss a laboratory session, for any reason, scores of “0” will be entered for all graded work associated with that experiment. “Weekly combined experiment score” consists of the addition of points acquired each week from the following:
Notebook + Safety/Technique, Results, Report/Postlab Assignment
Pre-lab Quizzes are not part of the “Weekly combined experiment score” (see details below in Section VI-i Pre-lab Quizzes).
If you do not conduct a particular experiment, then you are not permitted to submit a report for that experiment, but you are permitted to complete a postlab assignment IF one is assigned for that experiment. However, in this case you will receive 0/20 for the Notebook and Session portions of the weekly score (Safety/Technique and Results). Also, you may not receive credit for any questions related to data from an experiment that you did not conduct. Unless instructed to do so by the Instructor of Record, you are not permitted to use your peers’ data. Also note that completing only a postlab assignment does not count as one of your “completed” laboratory sessions, if you do not participate in the actual laboratory session.
*Religious Observances. The only exception to the policy above is absences for religious observances, when pre-arranged rescheduling is possible. In order to request to reschedule a session you must contact the Instructor of Record via email no later than September 15th with a detailed request to reschedule. Please be aware that there are limited fume hood stations and thus limited capacity to offer rescheduling during most sessions. Upon your request prior to Sept. 15th, we will let you know when alternative lab times are available during the same experiment cycle, and you will need to confirm within one week which alternative session you will attend. Requests made after September 15th will not be eligible for rescheduling. Remember, only your top n-1 experiment scores count toward your final grade.

Documentation. We do not request or collect documentation for absence(s). If you have documentation for an absence, keep it for your personal records and the possibility of use in the future. If you miss or anticipate missing three lab sessions, all due to a chronic illness or other extreme circumstance, schedule a meeting with the course Instructor of Record (not your section Instructor) as soon as possible. In this case passing the course this semester is unlikely, but an Incomplete status may be considered, but often requires consultation and vetting with the Dean.

Tardiness. Important safety and organizational statements are often given at the start of the session. If you miss arrive late it can cause safety issues, distract the Instructor as they try to get you caught up, disrupt others, lead to a rushed or incomplete experiment, among other potential issues. Arriving 5+n minutes after your laboratory schedule start time will incur a penalty of minus n points from your weekly experiment score. For example, arriving 6 minutes late incurs a penalty of -1 point. Arriving 15 minutes late will incur a penalty of -10 points. If you arrive 20 or more minutes late you will not be permitted to carry out the experiment session.

VI. Grading and Other Requirements
You will receive a single grade for the combined Organic Chemistry lecture and laboratory portions of the course. The laboratory portion contributes 25% to the overall organic chemistry course grade. Your final grade will be based on your (1) highest m-1 prelab quiz grades, (2) highest n-1 weekly experiment scores, and (3) written final exam (Where “m” and “n” are the number of prelab quizzes and experiments offered to your section, NOT the numbers you personally completed if those numbers are different. See the detailed descriptions of these grade items in the syllabus). Note that the weekly experiment score consists of the combined notebook + safety/technique and results + report/post lab assignment grades for each experiment. You must complete at least 7 of the laboratory experiment sessions and associated work, as well as the final exam in order to be eligible to receive a passing grade for the course (carefully read the “V. Attendance and Tardiness” section). You must independently pass both the lecture and the laboratory portions of the course in order to pass this joint course. That is, failure to pass either portion of the course results in an overall failing grade. A score of 55% is necessary to pass the laboratory portion of the course.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Pre-lab quizzes</td>
<td>15%</td>
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<tr>
<td>Notebook</td>
<td>10%</td>
</tr>
<tr>
<td>Safety/Technique</td>
<td>5%</td>
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<tr>
<td>Results</td>
<td>5%</td>
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<tr>
<td>Laboratory Reports/Postlab Assignments</td>
<td>40%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
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</tbody>
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The following sub-sections further describe each component of the laboratory grade.
VI-i. Prelab Quizzes

As a way of preparing for each experiment, you should arrive at the laboratory prepared to take a quiz each week. Quizzes will take place in the laboratory, for a specified amount of time, typically at the beginning of the session. If you arrive late to the laboratory session while a quiz is being taken, you may take the quiz but you must stop at the same time as everyone else. If you arrive after the quiz has been taken, you may not take the quiz, and you will receive a score of “0” for that quiz. No resources may be used during the quiz. **Anyone caught in possession of any type of resource that may potentially aid them or others in taking a quiz** (e.g. handouts, any electronic device that is visible to an instructor, calculators, notebooks, etc.) will receive a “0” for all graded components of the experiment and will be required to leave the laboratory. **Cheating is a direct violation of NYU’s policies and will be dealt with accordingly (See Syllabus section “V. Academic Honesty”).** Quiz content will be based on the assigned reading/handouts for the upcoming experiment (i.e. the experiment that you will be performing that day) unless otherwise announced by the course instructor. The quiz will cover information related to the experiment, including but not limited to theory, background, and experimental procedure. A typical quiz will have 3-6 multiple-choice, multiple answer, or short answer questions. Note that (1) you may not have a quiz for every experiment, and (2) not all quizzes will be the same, even for the same experiment. If you miss a quiz, for any reason, you will receive a score of “0” (but remember, your quiz grade will be determined by the average of your highest m-1 quiz grades, where “m” is the total number of quizzes offered to your section).

VI-ii. Notebook (10 points per experiment)

All students should see the Notebook Guidelines document that is posted on the NYU Brightspace website. A laboratory notebook (Student Lab Notebook, Organic Chemistry, 100 Carbonless Duplicate Sets, Hayden McNeil) can be purchased from the NYU bookstore. Please note that a student who does not use the assigned notebook with carbonless duplicate pages will receive a “0” for the notebook part of the grade. Your notebook is a tool to help you prepare for the experiment and to record your observations during the lab period. If the laboratory notebook has not been prepared prior to arrival at laboratory, the student will be removed from the laboratory as a safety risk. Your notebook will serve as your only source of information in conducting the experiment. **You may not bring the textbook, handouts, or any other source of information into the laboratory unless approved by the course Instructor.** Instructors may check notebooks at any time. At the end of the laboratory session, you must give your section instructor the carbon copy of your entry; notebook carbon copies will not be accepted after the student leaves the laboratory.

Your notebook grade should be written on your graded report/postlab assignment for the given experiment. If you do not see this score, ask your section Instructor immediately. These scores may only be disputed for one week after they are returned (see Section V-vii. Regrades). Do not approach your instructor at the end of the term requesting a re-grade of materials that were returned more than one-week prior. In rare cases where notebook keeping is not relevant for the session, these points may be reallocated to another form of assessment that will count as part of the weekly experiment score.

For additional information see Notebook Guidelines document posted on NYU Brightspace.
**VI-iii. Safety/Technique (5 points per experiment)**

Incidents that reduce the level of your safety or the safety of those around you will lower your score (see section “IV. Laboratory Safety, Policies, and Procedures”). Severe penalties will be incurred for senseless negligence, which has no place in a chemical laboratory. For example, leaving any type of chemical or waste in personal or common areas, or failure to leave your common glassware clean and organized condition is unacceptable. If communal areas are broadly abused, the instructors may apply a penalty to all students in the lab; encourage your peers to clean up after themselves.

You will be assessed for your technique during each laboratory period. Improper use of laboratory equipment, materials, or chemicals (including over dispensing) will lead to point deductions. Your instructor will evaluate your understanding of the experiment and laboratory safety every laboratory period. Your answers to questions will be part of your technique grade. If the instructor views you as unprepared to undertake the laboratory experiment for the week, they will remove you from the laboratory and you will receive “0” points for the experiment.

You will not be allowed to leave the laboratory until all personal and communal work areas/glassware are in satisfactory condition. If a balance or piece of glassware is dirty/broken/missing/etc. upon your arrival, inform an instructor immediately. They will help to rectify the situation and penalize the person who left the item in poor condition. However, doing nothing to resolve the situation is unacceptable. Ultimately you are responsible for leaving the space in good condition when you leave the laboratory and failure to do so will result in point deductions. Your section Instructor will often check that your laboratory locker is locked at the end of each lab period. If you leave the lab with your locker door ajar/unlocked, you will lose points. This is for your own protection.

Note that average performance in the laboratory with regards to technique/safety will earn a score of 3/5. Your Safety/Technique grade should be written on your graded report/postlab assignment for the given experiment. If you do not see this score, ask your section Instructor immediately. These scores may only be disputed for one week after they are returned (see Section V-vii. Regrades). Do not approach your instructor at the end of the term requesting a re-grade of materials that were returned more than one week prior. In rare cases where safety/technique are not relevant during the session, these points may be reallocated to another form of assessment that will count as part of the weekly experiment score.

**VI-iv. Results (5 points per experiment)**

The outcomes of your experiments will contribute to this portion of the grade. Points for this section may be assigned based on purity and/or yield of a reaction or percent recovery of a purification process. Points for this section may also be assigned based on your interpretation of results or group work/problem solving (when instructed to do so). If you do not properly label and submit the required sample/data during your assigned laboratory session, you will receive a score of “0” for this portion of the weekly experiment grade. In rare cases where results are not relevant during the session, these points may be reallocated to another form of assessment that will count as part of the weekly experiment score.
VI-vi. Laboratory Reports/Postlab Assignments

General Information.

For each experiment either a Report or Postlab Assignment will be assigned. Both Reports and Postlab Assignments must be fully electronic (NO hand written text/drawings, except spectra when specified). All chemical structures and TLC plate images must be generated using the ChemDraw program (available for free download via the instructions on the library website). All students should see the ‘Notes on Laboratory Reports’ and the ‘Report Template’ document that are posted on the NYU Brightspace website, prior to writing a report.

Due Dates and Submission Requirements.

Reports and Postlab Assignments are due at the beginning of the laboratory session one week after the experiment is performed. Reports/Postlab Assignments must be submitted 1) as a hard copy to your section instructor, AND 2) uploaded to NYU Brightspace as a PDF file (using “Turnitin”). Make sure your PDF file has been uploaded before the laboratory session starts when the report is due, otherwise the report will be late. Late reports will incur a 25% point deduction if turned in late, but within 24 hours after of the assignment due date/time. Assignment submission beyond 24 hours after the original deadline will result in a score of “0.”

If you are absent from any laboratory session for any reason, the previous week’s assignment is still due one week after the experiment was performed. However, in this case the assignment will be counted as on time if you submit the assignment electronically via Turnitin AND email your section instructor to notify them of your report submission to Turnitin. You should make arrangements with your section instructor to give them the hard copy as soon as possible (do NOT simply “drop it off” at the laboratory or chemistry office without informing your section instructor). Any assignments that are submitted to the Chemistry office help desk (Silver 1001) MUST have a cover sheet that includes ONLY (1) your name, (2) the course number, (3) your section number, and (4) most importantly your SECTION INSTRUCTOR’S FULL NAME.

Turnitin.

When you successfully submit your report to ‘Turnitin’ (via the link on NYU Brightspace) you will immediately receive a confirmation email receipt. It is your responsibility to make sure you receive and save this confirmation. If you do not receive an email confirmation indicating successful upload of the assignment to Turnitin, email a copy of your report to your section instructor prior to the time the assignment is due, otherwise the assignment may be counted as late. It is not required but sometimes helpful if your file names are descriptive, such as ‘Last Name-First Name-Exp Number’ (e.g. Curie-Marie-Exp 1).

Turnitin will only accept PDF and word documents. Make sure that your file name contains one of these three extensions: .docx, .doc, .pdf. Do not submit files from Pages.

If you must resubmit a document to Turnitin, 1) you will have to gain permission from your instructor, and 2) you may need to remove the prior submission in order to upload the new one.

VI-vii. Weekly Experiment Score

The “Weekly Experiment Score” consists of the combined notebook + safety/technique + results. Traditionally it is rare, but in cases where an experiment, or experiment sequence, requires two weeks for completion, the experiment scores may be weighted as either one or two experiment scores, as determined by the Instructor of Record. In cases where one experiment requires two weeks for completion and is counted as one experiment score, the grade components may differ from those listed in this syllabus. For example, if there are two sets of “in-session scores” (e.g. X/20 and Y/20) and only one report/postlab assignment (Z/40), then an overall average may be
determined (e.g. \([X+Y+Z]/80=A\)) and counted as one “experiment score” (e.g. 60xA). Another possibility is that the postlab assignment may be counted as double (e.g. \(Z'/80\)) and the resulting average (e.g. \([X+Y+Z']/120=A'\)) may be counted as either one or two experiment scores (e.g. 60xA’). Also, as a reminder, there are no excused absences. That is, if you miss one experiment for what you consider to be a valid reason (and it might be-- many students encounter valid reasons), you do not also “drop” an experiment score in addition to the zero incurred from the missed session.

**VI-vii. Final Exam**
If you do not take the written exam it will be graded as “0” points unless you provide a valid notice. The notice must be submitted to the course Instructor of Record (not to the section instructor) within 2 days of the missed exam (and vetted by the Dean). There will be NO make-up exam for written final laboratory exam, but an “Incomplete” status may be considered.

**VI-viii. Regrade for Any Evaluation Component**
For re-grading of any type of course assessment, you must submit a Regrade Form within one week after the graded work is available to you. The Regrade Form on the Laboratory NYU Brightspace website should be used. Do NOT make any marks on assignment/quiz/exam/report (any marks directly invalidate any materials for re-grading). Note that we will occasionally copy student work in order to minimize the temptation to falsify claims. *Cheating is a direct violation of NYU’s policies and will be dealt with accordingly (See section ‘VII. Academic Honesty’).* You must include a detailed written statement addressing why something should be re-graded, i.e. a statement such as ‘re-grade question 2’ is not acceptable. Tell us why you think your answer/report/performance deserves more points. While instructors can provide insight into errors made on a laboratory work, instructors are strictly forbidden to make any grade changes during a personal encounter. Regrades are strictly done by the written request process to ensure objectivity. Regrade requests should first be submitted to your laboratory section instructor for consideration. Cases that cannot be resolved between the student and the section instructor, with both parties approval, should be transferred to the laboratory course Instructor of Record for review. In this case a detailed description of why a resolution between the student and the section instructor was not satisfactory must be included with the regrade form.

**VII. Academic Honesty**
All students are required to comply with the NYU Academic Integrity policies and the Honor Code, which can be found at:

- [http://cas.nyu.edu/page/academicintegrity](http://cas.nyu.edu/page/academicintegrity)
- [http://cas.nyu.edu/page/honorcode](http://cas.nyu.edu/page/honorcode)

It is expected that all students are aware of their responsibilities not to cheat. ‘Teamwork’ is NOT allowed during the prelab quizzes/questions, writing of reports/postlab assignments, or exams. Work in the lab is to be carried out independently, unless otherwise instructed by the course Instructor of Record. No one in the laboratory course has a laboratory partner. Therefore, you should NEVER use another student’s results as if they are your own; this is considered cheating. Each student must carry out his/her own experiment. You may be directed to share data during selected collaborative projects but this will be at the explicit instruction of the course Instructor of Record and all sources of data must be cited. ANY unauthorized data sharing will
be penalized, at minimum, by a score of “0” for all graded components of the experiment. Cheating off of another person’s work is unethical, unacceptable, and is a direct violation of NYU’s policies, and will be dealt with accordingly. Falsifying work (for example before turning it in for a re-grade) is cheating and will be reported. Note that we will occasionally copy student work in order to minimize the temptation to falsify claims. A problem with serious consequences in the organic laboratory course is plagiarism. Plagiarism is to use someone else’s ideas, words, or figures as your own. That means that you cannot use current or old reports, data, figures (such as ChemDraw figures), etc. from your textbook, friend, labmate, roommate, the internet, commercial report-writing websites, or anyone other than yourself.

Submission of any previous semester course materials or any material/resources available through the internet is NOT allowed for this course. Even taking a single phrase from another source is plagiarism and will be viewed as such. We are fully aware that old reports are available on the web. You are NOT allowed to collaborate on the laboratory reports with anyone inside or outside of the course. This includes (but is not limited to) that you cannot exchange ChemDraw figures, Excel figures, etc. The transfer of any file between any two parties, and subsequent submission of its contents, in full or in part, for a grade is considered plagiarism. Make sure you are NOT using these prohibited resources but instead hand in a laboratory report that is solely based on your data, thoughts, and writing.

As discussed in section “VI-iv. Laboratory Reports/Postlab Assignments,” all students are required to upload each laboratory report to Turnitin as a PDF file. Note that Turnitin will automatically scan each report for overlap with any other report ever submitted to Turnitin as well as resources on the web (Turnitin scans not only for overlap in writing but also figures, tables and schemes), i.e. we WILL recognize if you cheated or plagiarized.

If we recognize that you plagiarized anywhere in your coursework there will be a penalty that is non-negotiable. The first time you hand in a plagiarized work, you (1) will receive a “0” for ALL grades related to the experiment for which the report containing plagiarism was handed in (these grades WILL be counted as scores that determine your final grade), (2) will receive a deduction of 10% of your final overall laboratory grade, (3) will be reported to the Dean’s office, and (4) may receive a “0” for the entire laboratory part of your organic course grade. If you hand in a plagiarized work for the second time, you (1) will receive a “0” for the entire laboratory part of your organic course grade, (2) will not be allowed to continue with the organic laboratory for the rest of the semester, and (3) will be reported to the Dean’s office in another letter. That is a “0” for the WHOLE semester not just for the one laboratory session. Note that if Turnitin recognizes that students worked together on laboratory reports or used the same internet source, etc., (i.e. it recognizes an overlap between two or more laboratory reports, or recognizes that a laboratory report is copied from the internet or an old laboratory report, in part or in whole) it alerts us to which laboratory reports have notable overlap. Each student whose laboratory report is flagged will be penalized INDEPENDENTLY, regardless of whether you are actually the student that copied the laboratory work or the student that allowed access to his/her laboratory work (both offenses constitute academic dishonesty and will be penalized equally).

Note that penalties for plagiarism are NOT contingent upon when the student is caught for plagiarism. For example, if a student commits plagiarism on Experiments 2 and 3, and is caught at the end of the semester, the full penalty for multiple cases of plagiarism, as described above, will be applied.

Any student who violates the “academic honesty” clause will be reported to the Dean’s office, no exceptions, and a recommendation will be made to the Dean’s office that the violation result in a permanent note in the student’s record.
VIII. Additional Miscellaneous Notes

1) For each experiment, check the NYU Brightspace laboratory website for additional handouts. In case of conflict, instructions on the handouts supersede those written in the textbook.

2) Experiments are correlated to the lecture concepts when possible. You are responsible for all relevant theory covered in lecture.

3) In an effort to correlate the lecture and laboratory topics, experiments will be announced the week before each experiment. This will allow for our ability to adjust the experiment order to best match the variable pace of the lectures. That being said, the laboratory can be a great place to introduce certain new concepts. Therefore, you should not be surprised if you find yourself learning “lecture-type” concepts for the first time in the laboratory setting.

4) Each section in G&M ends with a set of exercises; it is in your best interest to work on these problems. Certain exercises may be announced for you to address formally in your written report/postlab assignment.

5) Student who are approved by the Moses Center for special accommodations and would like to utilize them must provide written documentation to the Instructor of Record for the course at least 5 business days in advance of the event for which the accommodation is requested.

6) As science, technology, and pedagogy are constantly evolving, the Instructor of Record reserves the right to modify the syllabus or experiment schedule in an effort to offer NYU students the highest quality laboratory experience possible.