I. COURSE OVERVIEW: Welcome to Organic Chemistry II Laboratory! Throughout this semester, we will utilize the techniques learned and skills acquired in Organic Chemistry I to carry out chemical reactions, purify complex mixtures, and analyze the purity of material. We will determine the identity and purity of organic material using data obtained through thin-layer chromatography (TLC), gas chromatography (GC), mass spectrometry (MS), infrared spectroscopy (IR), and nuclear magnetic resonance (NMR) spectroscopy. While vastly expanding your knowledge of organic chemistry and honing your technical skills, you will also employ critical thinking skills to develop and modify procedures. These experiences will benefit you as you progress to advanced courses, graduate or professional schools, and clinical settings.

This course is divided into seven sections, each lead by a section instructor, who will be available to guide you through laboratories and post lab assignments. You may attend office hours for any instructor affiliated with the course, and you are encourage to use these times to ask questions and develop your understanding. Experiment Handouts for each lab session will be posted one week prior to lab on NYU classes. Post-lab assignments will also be available through NYU classes.

Laboratory Sections

<table>
<thead>
<tr>
<th>Day (9:30 – 1:45)</th>
<th>Section</th>
<th>Instructor</th>
<th>Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thursday</td>
<td>207</td>
<td>Petra Tosovska</td>
<td><a href="mailto:pt373@nyu.edu">pt373@nyu.edu</a></td>
</tr>
<tr>
<td>Thursday</td>
<td>209/4</td>
<td>Danielle Vellucci</td>
<td><a href="mailto:dv41@nyu.edu">dv41@nyu.edu</a></td>
</tr>
<tr>
<td>Friday</td>
<td>201</td>
<td>James Eastwood</td>
<td><a href="mailto:jre318@nyu.edu">jre318@nyu.edu</a></td>
</tr>
<tr>
<td>Friday</td>
<td>202</td>
<td>Shiyu Chen</td>
<td><a href="mailto:sc5900@nyu.edu">sc5900@nyu.edu</a></td>
</tr>
<tr>
<td>Friday</td>
<td>203</td>
<td>Alexander Andia</td>
<td><a href="mailto:aaa406@nyu.edu">aaa406@nyu.edu</a></td>
</tr>
<tr>
<td>Friday</td>
<td>206</td>
<td>Handoko</td>
<td><a href="mailto:hh1454@nyu.edu">hh1454@nyu.edu</a></td>
</tr>
</tbody>
</table>

Office Hours

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11-12 pm Danielle Vellucci (Silver 1001 – B)</td>
<td></td>
<td>2-3 pm, Alexander Andia</td>
<td>1-2 pm, Shiyu Chen (Silver 1001 – B)</td>
</tr>
<tr>
<td></td>
<td>1-2 pm, James Eastwood (Silver 1001 – B)</td>
<td></td>
<td>2-3 pm, Alexander Andia</td>
<td>1-2 pm, Shiyu Chen (Silver 1001 – B)</td>
</tr>
<tr>
<td></td>
<td>4-5 pm, Petra Tosovska</td>
<td></td>
<td>2-3 pm, Alexander Andia</td>
<td>2-3 pm, Handoko (Silver 1001 – B)</td>
</tr>
<tr>
<td></td>
<td>Silver 1001 Q</td>
<td></td>
<td>2-3 pm, Alexander Andia</td>
<td>2-3 pm, Handoko (Silver 1001 – B)</td>
</tr>
</tbody>
</table>
Laboratory Manager: Nerline Louis

Stockroom Managers: Noel Mendoza, John Gallie

II. COURSE OBJECTIVES

- Successfully implement and modify protocols from written procedures to produce complex organic molecules
- Understand how the reactions covered in lecture are carried out in a laboratory setting
- Collect data on authentic student samples
- Interpret advanced spectroscopic data
- Enjoy some of the fascinating chemical reactions that produce light, scent, and very impressive molecules

III. REQUIRED MATERIALS


Notebook: Student Lab Notebook, Organic Chemistry, 100 Carbonless Duplicate Sets, Hayden McNeil. (Available at NYU bookstore)

Personal Protective Equipment (PPE): Laboratory Safety Goggles (NYU bookstore), 12 disposable laboratory coats, 1 box of disposable gloves.

* Gloves and coats can be purchased in the stockroom using NYU CAMPUS CASH only. The instructor of record must approve gloves not purchased through the stockroom. *

IV. Course Correspondence

If you have questions regarding logistics for upcoming labs and post-lab assignments, or any other concerns pertinent to the course, first email your section instructor. If you do not receive a response, or if your section instructor is unable to resolve the issue, please contact Professor Vellucci (dv41@nyu.edu) directly.

The Following Information Must Be Included in Emails:

1.) Name
2.) Section Number
3.) Subject including the words: “Organic Chemistry Lab”

V. LABORATORY SAFETY

Maintaining a safe environment in the laboratory is our penultimate priority. Following a safety tour during the first lab, you are required to complete and pass an online safety quiz prior to the second week of lab. This quiz will address: proper PPE, safety showers, eye wash stations, evacuation protocols and the transport and disposal of chemicals.

To ensure your safety in the lab, you are responsible for the following:
1.) Preparation and Prompt Arrival

Lab will begin at 9:30, and safety information will be highlighted during a brief pre-lab lecture. Those who arrive after the lecture may not be permitted to carry out the experiment, and will receive a “0” for the experiment.

Prior to lab, your notebook must be prepared with enough information to allow you to efficiently carry out the experiment, including notation of relevant safety hazards associated with the procedure and chemicals being used.

2.) Personal Protective Equipment (PPE) and Attire

**Goggles** are required in the laboratory, even when you are not directly handling chemicals. You are responsible for bringing your own goggles.

**Gloves** must be used when handling chemicals and equipment within the laboratory. We suggest that you purchase the box of 100 disposable nitrile gloves. Changing contaminated gloves is important to prevent penetration by solvents such as dichloromethane, and you will often use multiple pairs per session. Latex gloves are NOT permitted.

**Laboratory Coats** are required in the laboratory, and must be disposed of prior to leaving the lab space.

**Clothing** that completely covers your legs and closed toe shoes are required. Skin between your pants and shoes should not be exposed.

3.) Proper Chemical Handling

Treat all chemicals with caution!!!

Dispose of Waste in the proper containers for: trash and lab coats / broken glass / liquid aqueous / liquid organic / solid organic / other special hazardous waste

Beakers, cylinders, and flasks must be covered if transporting liquid waste

Alert the instructor if there is a spill anywhere in the lab to assure that it is properly cleaned

Work with the fume hood sash no more than half way up to prevent breathing hazardous fumes

4.) Laboratory Policies

You may not consume food, gum, or beverage in the laboratory!

Cell phone usage is not allowed in the laboratory

Personal items, such as coats, backpacks and purses may not be brought into the lab.

General lockers with electronic locks are available on the 4th floor of Silver, and they will automatically unlock after 5 hours.

Communal laboratory glassware, balances, and equipment must be returned and properly cleaned prior at the end of the lab session.
Technique and Safety Points will be awarded for compliance with these policies.

5.) Illness, Injury, and Medical Considerations

If you become ill or injured while in the laboratory, inform your instructor immediately. The course of action will depend on the circumstances, but at the very least, we will recommend that you visit NYU Health Services.

VI. ATTENDANCE

To receive a passing laboratory grade, you are required to complete 7 out of 10 labs (including corresponding post – laboratory assignments) as well the practical and written final examinations.

It is typically not possible to schedule make up laboratory sessions. You will receive a score of “0” for all missed quizzes and laboratory sessions. Only your highest 8 out of 10 laboratory scores will be counted towards the calculation of your grade, and your two lowest quiz scores will be dropped! It is suggested that you familiarize yourself with the post-lab questions from missed laboratory assignments, as all content is relevant for the final exam. If you are going to be absent, you may email your section instructor, but you are not required to. If you have valid medical documentation, it is suggested that you save it.

VII. GRADING

Your overall laboratory score will contribute to 25% of your overall organic chemistry course grade. You must pass the lecture and the laboratory to be eligible for a passing course grade. A score of 55% or above will qualify as passing the laboratory.

The Laboratory Score will be calculated based upon the following percentages:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Lab Quizzes</td>
<td>15%</td>
</tr>
<tr>
<td>Notebook</td>
<td>5%</td>
</tr>
<tr>
<td>Safety / Technique</td>
<td>5%</td>
</tr>
<tr>
<td>Results</td>
<td>5%</td>
</tr>
<tr>
<td>Laboratory Assignments</td>
<td>30%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>10%</td>
</tr>
<tr>
<td>Final Exam Practical</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam Written</td>
<td>15%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Pre-Lab Quiz:** Lab quizzes will be given before pre-lab lecture and will last approximately ten minutes. If you arrive late, you will be given the remaining time to take the quiz, and quizzes will not be handed out once the official time has ended. The quiz will pertain to the experimental procedure, theoretical background, and any other assigned pre-lab reading. The two lowest quiz scores will be dropped.

**Notebook:** Prior to arriving in the laboratory, you must prepare a notebook from which you are able to conduct the experiment directly. *Unless specified, you will use this instead of lab handouts or textbooks during the lab session.* Your section instructor will check your notebook at the beginning of the lab session, and if you are not adequately prepared, you may be asked to leave the laboratory. At the end of the lab, you will hand in carbon copies to your instructor. **5 notebook points may be obtained per experiment.**
Safety / Technique: You will earn points by adhering to the safety and policy guidelines listed above in the syllabus. Violations will result in point deductions, and potentially dismissal from the laboratory. Proper execution of techniques, organization, and cleanliness will earn you points here! Failure to wear PPE, disregarding the safety of your peers, leaving a mess by the balances, and improper disposal of waste will be penalized. **5 Safety / Technique points will be assigned based on the observations of your instructor per experiment.**

Results: your instructor will evaluate the outcome of your experiment. Criteria for evaluation will vary. **5 Results points will be assigned per experiment.**

Laboratory Assignments: Post laboratory report and assignment guidelines will be posted on the NYU Classes site after each lab session. A due date will be indicated, and reports must be submitted to Turnitin under the assignments tab in NYU classes on time. Turn it in will only accept pdf and word documents. Do NOT submit files from Pages. A penalty of 20% will be received for work turned in late. Assignments received more than 24 hours after the due date will not be accepted. We will use electronic grading this semester; for most assignments you will not need to submit a hard copy. If you are absent from lab the day an assignment is due, please be sure to submit it electronically to avoid deductions.

Exams: Practical examinations will be administered in the laboratory. You will be evaluated on your technique, completion of a task, and results. If you have a valid excuse for an absence, a practical exam make-up can be offered. The written final exam will be given during exam week on **Monday, December 18: 4:00 – 5:50 pm.**

VIII. Re-Grade Policy

If you would like your work to be evaluated for a re-grade, please contact your section instructor within 14 days of receiving the work graded. Note which sections you believe have been graded incorrectly with an explanation of why. Before submitting a formal request, you can ask your instructor for clarifications on how assignments were graded. If your section instructor and you do not come to a resolution, contact Professor Vellucci for further consideration. Do NOT leave re-grades for the end of the semester!

IX. 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)

There will be no tolerance for academic dishonesty. Quizzes and exams are carried out independently, and failure to do so will result in a score of “0”. Data reported to your section instructor must be accurate and your own. If an experiment requires sharing of data, acknowledge the data’s original owner in your notebook and lab report. While you may discuss concepts and ideas with other students in office hours and laboratory sections, work submitted must be original and authentic. You may not directly copy words or figures from another student, book, or online resource. If your section instructor recognizes plagiarism, you will receive a “0” for the assignment, and the instance will be reported to the dean’s office. This score will not be eligible as a dropped lab score for calculation of the final grade. All students involved will be penalized; sharing your work inappropriately and copying are considered equal offenses. A second case of plagiarism for any student during the semester will result in a failing grade for the laboratory portion of the course.
X. Special Accommodations

Students 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 exam for which the accommodation is requested. If you require extra time for weekly quizzes and have the proper documentation, we can usually meet this accommodation in the lab.