# Lecture Course Schedule and Outline

**LECTURES:**  
M, T, W, Th 9:00-11:00 a.m.  
Room: 411 Silver  

**INSTRUCTOR:** Prof. John M. Halpin  
Office: 1001O Silver  
Phone: 212-998-8418

**RECITATIONS:**  
T, Th 11:15-12:30  
Room: Check Albert

**DATE** | **DAY** | **CHAP.** | **TOPIC**
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May 21 | M | 1, 2 | Study of Chemistry; Components of Matter
May 22 | T | 2 | Components of Matter
May 23 | W | 2, 3 | Components of Matter; Stoichiometry
May 24 | Th | 3 | Stoichiometry
May 25 | F(=M) | 4 | Major Classes of Chemical Reactions
May 28 | M | | Memorial Day (no classes)
May 29 | T | 4, 6 | Major Classes of Chemical Reactions; Thermochemistry
May 30 | W | 6 | Thermochemistry
May 31 | Th | | Exam 1 (chaps. 1-4)
June 4 | M | 6, 7 | Thermochemistry; Quantum Theory
June 5 | T | 7 | Quantum Theory
June 6 | W | 8 | Chemical Periodicity
June 7 | Th | 8, 9 | Chemical Periodicity; Chemical Bonding
June 11 | M | 9 | Chemical Bonding
June 12 | T | 10 | Shapes of Molecules
June 13 | W | 10 | Shapes of Molecules
June 14 | Th | | Exam 2 (chaps. 4, 6-9)
June 18 | M | 5 | Gases
June 19 | T | 5 | Gases
June 20 | W | 5, 12 | Gases; Intermolecular Forces
June 21 | Th | 12 | Intermolecular Forces
June 25 | M | 12 | Intermolecular Forces
June 26 | T | 12 | Intermolecular Forces
June 27 | W | 12 | Intermolecular Forces
June 28 | Th | | Exam 3 (chaps. 10, 5, 12)

**NOTE:** This syllabus is for the lecture/recitation portions of the course ONLY. You will receive a separate syllabus for the laboratory component at your first laboratory meeting (on May 21).
CHEM-UA 125 General Chemistry I & Lab
Summer 2018

GENERAL INFORMATION

INSTRUCTOR

Name                   Office   Office hours       Phone
Dr. John M. Halpin    1001O Silver  M, W 11:30-12:30  (212) 998-8418

REQUIRED MATERIALS

Lecture notes: available at the NYU Bookstore.
iClicker lecture response device: available at the NYU Bookstore.
Molecular models: A set of molecular models is necessary. The "Organic Chemistry Set for Student", set 1013A (by Maruzen) is highly recommended.
Scientific calculator: Your calculator must be capable of evaluating logarithms, performing exponentiation, and calculating trigonometric functions. It must have at least an eight-digit display and you must be able to switch between scientific notation and decimal notation. Most standard scientific calculators have these features and they are priced as low as $13.

LECTURES

There are four lecture meetings per week for six weeks (less one for Memorial day, plus one on 5/25). We’ll also have exams during three of those classes. This means that each of our lectures will correspond to roughly a week of the fall semester course. In some cases, you must solve homework assignments in one night that are allowed three to five days in the fall. You have an exam every two weeks and two quizzes every week. You must eat, sleep, and breathe chemistry during this course to keep up. Can you do it? Yes. Can you learn chemistry well in this way? Yes. Can you get a good grade? It’s up to you.

My lectures (pretty much) follow the book, but I do not lecture "from the book". I say things in the way that I believe is the easiest to understand. The text is a good one, but once in a while I disagree with it. In such cases, you must follow my methods (I will make it clear when this is necessary).

I use my computer and a projector for all of my lecture presentations. Because I don’t have to write everything out by hand, you probably won’t have time to copy "everything" into your notebook. It is best if you sit back and listen and think. To make this possible, reduced size copies of my lecture notes have been printed and are available at the NYU Bookstore. The notes have some pieces missing to keep you alert. They also have nice wide margins and a small "Notes" section in which you can write any additional information that you feel will help you to prepare for exams (I say a lot that isn’t in the notes too!).

Attendance of the lectures is required and will be monitored through the iClickers. After you miss three (3) lectures, I will begin to deduct 1/2 point from your overall score for each additional absence. If you don’t check in or answer a question with your device during a lecture, then you were not there (forgotten devices, arriving too late, dead batteries, etc., count as absences).

Not everything in the text is important for this course, but there is no way of knowing what is and what is not except by listening to the lectures. The point is, you can’t do well in this course without reading the book, attending the lectures, doing the assigned homework (or more), and going to recitation to get any clarification that you require (and this is the order in which you should do these things too).

This course always demands a lot of time and effort. The summer version requires the same amount of effort (and time studying), compressed into a six week period. It is not abbreviated and it is not made easier.
Now that I’ve said all that I can to scare you (so that you’ll work hard), let me assure you that most people have done well in this summer course and they have learned just as much chemistry as those who take it during the fall semester. It is even possible to enjoy the course (and you will find it easier to learn the material if you do). This should be the only course that you be taking this summer and the ability to concentrate on just one subject is a pleasure in itself. Finally, I don’t think that there is any other science that can approach the range and the depth of chemistry or which can better help you to understand the (physical) world around you. Everything is chemistry.

**RECITATIONS**

The recitation is designed to help you to understand the course material. While it is where you will take twice weekly quizzes, you should view its primary purpose as a question and answer session where you can obtain an explanation of any course material.

The quiz will be given at the end of each recitation meeting. It will consist of a couple of problems or questions dealing with material covered in the lectures. You will always have more than 24 hours between lecture coverage and the quiz on a particular topic. However, since homework is not due until after a chapter has been completed, yet the quiz is meant to keep you current, you can be quizzed on a topic for which the homework has not been collected. Stay up to date on topics, and you’ll stay up to date for the quiz. In order to ensure equality between recitation sections, you MUST hand in your quiz when the instructor says that the time allowed has elapsed. 10 minutes is scheduled for each quiz.

**HOMEWORK ASSIGNMENTS**

The assigned problems have been chosen to clarify concepts that I regard as important and to give you practice in solving problems of the types commonly encountered on quizzes and exams. It is not possible to perform well at test time unless you have done the homework. One of the most frequent remarks I hear (after an exam) is "I really understand the material. I just can’t solve the problems!" What would you do if your doctor said "I understand your illness completely. I’m just not very good at curing it!" I’ll be happy if you do understand the material. But the fact is, your grade is going to depend upon your demonstrating that you understand it. To prove it, you have to answer questions and solve problems. Responding correctly, quickly, and coherently to these problems will require practice. So, do the homework assignments. In addition to the 9% of your grade that they earn, you will perform better at test time.

Some recommendations:

a) Read the chapter before trying an assignment.

b) Work independently, but (at least some of the time) try problems in the presence of another class member. If you get stuck, discuss it. Discuss concepts too!

c) Write notes to yourself while you do the homework so that you can remember which problems gave you trouble and what was unclear. When you get to recitation (or office hours) use those notes to frame your questions.

The molecular models that are required course materials will help you to understand the concepts of Chapter 10. You will not be allowed to use the models during the exams and quizzes, so use them extensively while you do the homework for that chapter.

**WEB COMPONENTS**

There is a web page for the general chemistry courses at NYU. The URL is

http://www.nyu.edu/classes/inorg

The page will contain information about the course and will be used to disseminate supplementary materials and to make announcements concerning the course. It contains a number of items and I recommend that you look at it at your earliest opportunity to see what is available. Please pay particular attention to the "Announcements" section. You will find there all important administrative notices for the course.

I will set up an NYUClasses page for the lecture section and, if your instructor requests, for your recitation section. The lecture NYUClasses page will be used by Prof. Rugg for the laboratory portion of the course - I will be using the NYUClasses page merely to send email messages to the entire class.
A note about email: Do not send email to me. See me in person whenever you have a question or need something from me. I have 2 hours set aside to meet with you each week and I am willing to talk with individuals at the end of each lecture. I will not reply to any email sent to me (so you will be wasting your time by sending it).

GRADING

There will be three examinations during this course. They will be held on alternate Thursdays (5/31, 6/14, and 6/28) from 9:15 a.m. to 10:55 a.m. They are not explicitly cumulative, though new chemical topics tend to build upon past topics. You are required to register for a recitation section for this course, where you will be given a brief quiz and turn in your written homework.

lab 25 %
exams 18 % each
quizzes 12 %
homework 9 %

STUDENTS WITH DISABILITIES

If you have a documented disability you can arrange to take exams and/or quizzes at the Center for Students with Disabilities (726 Broadway, 2nd Floor). It is your responsibility to make arrangements with that office and with me before the first quiz or exam.

ILLNESS

If you miss a lecture due to illness, study the lecture notes and feel free to ask questions about them. If you miss a quiz, you must provide documentation on a physician’s stationery that says that you were too ill to attend the recitation. If you are ill on the day of an exam and can provide a doctor’s note, your grade will be calculated based upon the other exams and coursework. Lecture/recitation/exam documentation must be given directly to Prof. Halpin; laboratory documentation must be given to Prof. Rugg. All documentation MUST include your name and dates to which it applies. YOU MUST attach to that a “documentation cover sheet” (downloadable in PDF format from our course web page) that shows exactly what work you missed (e.g., lecture, quiz, exam, lab) and the section number of your recitation (if that cover sheet is missing, the documentation will not be used and the absence will go unexcused). ALL documentation is subject to verification. An excused quiz will not count, but you still have to complete the homework. Unexcused quizzes count as zeros. If you miss more than one of the three exams and you have a doctor’s note, I will give you an incomplete (I) for the course and you can take a make-up exam during the fall 2018 semester. Any absence will put you behind in your work. At the pace of the course, it will be difficult to catch up. My advice is to avoid getting sick.

CONDUCT

Cheating in any form will result in a failing grade for this course and will be noted in your university records. It will ruin your career. If you give information to another student during a quiz or an exam, you are both cheating. We are very good at detecting cheating. Don’t try it.