CHEMISTRY 51
EVENING SESSION
FALL 08

CHEMISTRY 51 LECTURE - FALL 2008
Code MQ6A and MQ6B
Mondays 6:05-9:45 PM
Room 1310N

Lecturer: Maria Contel
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Tel. 718-9515000 ext. 2833
Office Hours: Tuesdays 5:00 -6:30 pm/Wednesdays 8:30-10:00 am

REQUIRED TEXTBOOKS

- **Organic Chemistry,** 5th Edition, W. Brown, C.S. Foote, B.L. Iverson, E. Anslyn. Thomson Brooks/Cole, Belmont, CA, 2005, ISBN: 0-495-38857-2
- **Organic Chemistry: A Guided Inquiry,** Andrei Straumanis, Houghton Mifflin Company, Boston, 2004, ISBN: 0-618-30852-0
- **Techniques & Experiments in Organic Chemistry**, 2nd Edition, L.B. Gortler and R.C. Tripp, Avery Publishing Group, Wayne, NJ, 1977
- **Supplement for Organic Chemistry 51 and 52, Brooklyn College Press**, 1987 (available only at the Brooklyn College Bookstore)

STRONGLY RECOMMENDED

- **Molecular Model Set for Organic Chemistry**, HGS, Maruzen

ADDITIONAL MATERIALS

If necessary will be supplied by the lecturer

TECHNOLOGY REQUIREMENTS

Portions of this course will require use of the Web and Internet tools (email etc.)

You may get material from my web page: http://userhome.brooklyn.cuny.edu/mariacontel/

Print out the handouts and materials sent by email or posted on the Web/Blackboard, as instructed.

The golden rules of email correspondence

- Check your email daily.
- ALWAYS put your "<yourname>" IN THE SUBJECT. It's not realistic to expect me to remember the handles of dozens of students and who is hiding behind flatbush_prince_of_darkness@aol.com.

- Email is a FORMAL means of communication (at least when you correspond with your professors or employers, etc.). Avoid abbreviations, slang and cuteness. Let's treat each other with respect. Use capital letters, punctuation, greetings and salutations as in a professional message.

- The use of magic words (please, thank you) and politeness in general is strongly encouraged.

- Sign every message at the bottom. Why? Because it is GOOD MANNERS and if it is a long message, the reader doesn't have to scroll up to check who the sender is (even profs suffer from ADD, sometime.).

- Exchange phone numbers or email addresses with your classmates. Please do not write to let me know that you were not in class (I already know) or will miss class; to ask me to summarize what we did or will do in class; or what the assignment is/was, UNLESS YOU HAVE SERIOUS REASONS. Email a classmate instead.

GETTING IN TOUCH	• If you need to communicate with me, the ONLY guaranteed way to reach me (apart from my office hours) is by EMAIL. The course EMAIL ADDRESS IS: mariacontel@gmail.com See the golden rules of email above.
HOMEWORK ASSIGNMENTS	• Homework assignments consist on **suggested problems** from the text book that are detailed below in the calendar and in the hand-out with the course organization for Chemistry 51 and in ChemActivities from the Organic Chemistry: A Guided Inquiry Book. • Students must bring a **notebook** with the homework assigned for each section completed before hand. I will regularly (and randomly) check on the notebooks in each section. • Please have a neat and concise notebook with all answers to the problems written in English. • You won't receive credit for the homework assignments. The suggested problems are to help you out to study. If you don't practice you won't succeed in this course. These problems are the minimum you should be working on. It is highly recommended that you work on problems from old quizzes and exams. You may find this information KEEP ALL YOUR HOMEWORK IN A FOLDER.
QUIZZES	Quizzes allow you to practice solving problems in a test situation. Quizzes (4-5) will be given to you on a regular basis (see schedule below) at the beginning of section. You will be given between 15-20 minutes to complete the quizzes *from the time section is scheduled to start*. Therefore, if you are late to section, you will have less time to complete the quiz.

LATENESS	Lateness is not only disruptive, but also disrespectful. As we are going to be working in teams when we use POGIL techniques I strongly recommend that you are not late (unless there is a good reason for it). Chronic lateness will not be tolerated: you will be excluded from class activities.
ABSENCES	BC attendance policy states that students are expected to attend all scheduled sessions of every class. The professor will try to consider emergencies, when they are documented, but the basic rule is that because class attendance is part of your grade, absences make the grade grow smaller.
CELLULAR PHONES AND PAGERS MUST BE TURNED OFF	• If you make or take a phone call, you will be asked to leave the room and **WILL NOT BE ALLOWED BACK IN**. • NO CELL PHONES ON YOUR DESKS DURING TESTS.

COURSE CONTENT AND OBJECTIVES

Course Description

This evening lecture course is design to help you to understand and to relate all the concepts that you need to learn in Chemistry 51. As I am going to be the person grading the quizzes and exams involved in the course Chemistry 51, I strongly recommend that *you attend ALL the lectures* and that you print the slides of the lectures before-hand. Study the chapter in the textbook that is relevant to the session before you come in! You have to do the problems assigned for homework as well. You are also encouraged to read and work on the assigned ChemActivities from the Organic Chemistry: a Guided Inquiry book. You are encouraged to work on sample exams and quizzes that you can find at Prof. Howell's web page: http://academic.brooklyn.cuny.edu/chem/howell/jhowell.htm.

It is important that you know how we will work in this course. *Please read this hand-out carefully*.

We have a full period of 3 hours and 40 minutes. In general and, unless we have the mid-term or second exam, we will divide the class in different sessions in two periods: from 6:05-7:45PM and from 8:05 to 9:45PM. We will have a recess of 20 minutes.

In this course we are going to learn the contents by using different techniques. I will lecture with slides, I will explain important problems from the suggested home-work and I will use POGIL techniques (your purple book). I will be mixing all this techniques at different times so you need to attend the WHOLE class.

What is POGIL ?
POGIL stands for Peer Oriented Guided Inquiry Learning. Basically we will work in **teams** of 4-5 students and we will follow the Organic Chemistry: A Guided Inquiry book. The activities in the book are called ChemActivities and are guided activities. They are structured so that the information is presented to the reader in some form (an equation, a table, figures, written prose) followed by a series of Critical Thinking Questions which will lead you to the development of a particular concept or idea. We may have one of these ChemActivities or workshop every class or every two classes. Nevertheless, you are given here the number of the ChemActivity related to the section from the text book and you are encouraged to read it and work on it with other students outside of the classroom. You need to have this book and be in class on time. No one will be accepted in class once we are working on these activities. You need to be in class at 6:05PM.

All our sessions are going to be based in **mutual understanding and trust** (instructor/students). I am here to help you out but you must, necessarily, **work outside the classroom**.
It will be strongly recommended that you work together with the members of your POGIL team or with other students outside the classroom.

However you must also realize that all quizzes and exams have to be taken individually. *You have to work and*

learn individually by using collaborative learning techniques.
The notebook with homework assignments is also individual. Lab work (described in a separate hand out) will take place individually (although occasionally some groups will be formed if necessary).

Learning Objectives

1. To **learn the contents** of the course that are detailed in the Chemistry 51 lecture outline hand-out and that can be summarized as follows:

- Structure of organic molecules, relation to reactivity
- Organic reaction patterns
- Mechanism of reactions
- Synthesis of organic compounds
- Techniques of the trade

2. To **understand** the topics covered by the lectures and textbook, to make **relations** between the concepts, to be able to solve problems that are not straightforward and that will involve different concepts and skills

3. To **develop and strength skills** to:

- **Work in teams** inside and outside the classroom (collaborative learning, cooperation)
- Participate in **group discussions**
- **Be part of your learning process in an active way** (preparation of sessions before-hand, working outside the classroom)

VERY IMPORTANT: All students are requested to address and to treat other students (from the same and different teams) as well as the instructor in a **respectful** manner. That does not exclude a little bit of sense of humor!

WE HAVE TO OPTIMIZE THE TIME IN ORDER TO GET THE MOST OF OUR CLASSES, PLEASE DON"T BE LATE AND BREAK INTO YOUR GROUPS WHEN WE WORK WITH POGIL TECHNIQUES QUICKLY!!!

Plagiarism

Policy on academic integrity
Academic dishonesty of any type, including cheating and plagiarism, is unacceptable at Brooklyn College. Cheating is any misrepresentation in academic work. Plagiarism is the representation of another person's work, words, or ideas as your own. Students should consult the Brooklyn College Student Handbook for a fuller, more specific discussion of related academic integrity standards. Faculty members are encouraged to discuss with students the application of these standards to work in each course. Academic dishonesty is punishable by failure of the "test, examination, term paper, or other assignment on which cheating occurred" (Faculty Council, May 18, 1954). In addition, disciplinary proceedings in cases of academic dishonesty may result in penalties of admonition, warning, censure, disciplinary probation, restitution, suspension, expulsion, complaint to civil authorities, or ejection.
(Adopted by Policy Council, May 8, 1991.)

So, basically, DON'T CHEAT in the exams. Do not copy solved problems from other students. You will have to take exams/quizzes individually and it won't be of any help to you.

ASSESSMENT

Assessment Statement for the Evening Lecture Classes	
Quizzes Grade	25%
Lecture Examinations	25%
Final Examination	25%
Laboratory Grade	25%

Calendar

- No classes Sat. August.30th, Sun. August. 31, Mon. Sept. 1, Mon. Sept. 29, Tues. Sept. 30, Wed. Oct 1, Thurs Nov 27-Sun Nov 30,
- Tues. Oct. 14 is a MONDAY conversion day

First Lecture Examination: October 20 (Monday) Week 6

Second Lecture Examination: December 1 (Monday) Week 12

Final Exam Week 15

ALWAYS bring NOTEBOOK, textbook, guided inquiry book, supplement, molecular models and hand-outs to class.	
WEEK 1 Sept 8th	Subject: Nomenclature of Functional Groups. Read the supplement 2-8. Subject: Covalent Bonding (1.1-1.4) and Shapes of Molecules (1.5-1.8). ChemActivities: 1-3 **Homework**: Chapter 1, theory and suggested problems (22, 24, 25, 27-32, 34, 37, 45, 50-52, 57, 59, 60, 64-67, 71, 72). Read ChemActivities 1-3.
WEEK 2 Sept 15th	Alkanes (2.1-2.10) ChemActivities: 4, 5, 6 **Homework**: Chapter 2, theory and suggested problems (21, 23, 26, 28, 36, 39, 51, 52, 56, 62-63). Read ChemActivities 4,5,6.
WEEK 3 Sept 22nd	1st Quizz Subject: Stereochemistry (3.1-3.4) and Diastereomers, Meso Compounds (3.5-3.9). ChemActivities: 7 **Homework**: Chapter 3, theory and suggested problems (15-17, 19, 22, 24, 27, 29, 31, 32, 37, 39, 40). Read ChemActivity 7.

WEEK 4 Oct 6th	Subject: Acids and Bases (4.1-4.6) and Alkenes (5.1-5.4). ChemActivities: 8, 9, 10 **Homework**: Chapter 4, theory and suggested problems (10, 11, 15, 16, 19, 20, 22, 23, 25, 28, 31, 33, 35, 37, 41, 42, 44, 45). Chapter 5, theory and suggested problems (9, 10, 12, 14, 18, 20, 21, 30, 33, 37). Read ChemActivities 8, 9, 10.
WEEK 5 CAREFUL! Tues Oct. 14th	2nd Quizz Subject: Reactions of Alkenes (6.1-6.7) ChemActivities: 17, 18, 21, 22 **Homework**: Chapter 6, theory and suggested problems (13, 14, 15, 17, 20, 21, 23, 26, 34, 37, 39, 42-45, 47,-51). Read ChemActivities 17, 18, 21, 22.
WEEK 6 Oct 20th	Subject: Alkynes (7.1-7.9) and Halogenation of Alkanes (8.1-8.8) ChemActivities: 23, 20, 21 **Homework**: Chapter 7, theory and suggested problems (8, 11, 16, 17, 19, 20, 23, 24, 28). Chapter 8: 10-12, 14, 15, 18, 21, 23, 26, 28-31). Read ChemActivities 23, 20, 21.
WEEK 7 Oct 27th	FIRST LECTURE EXAMINATION/ Explanation of the exam
WEEK 8 Nov 3rd	Subject: Substitution Reactions (9.1-9.5) and Elimination Reactions (9.6-9.9) ChemActivities: 12-15 **Homework**: Chapter 9, theory and suggested problems (10-13, 15-18, 20-23, 25,-29, 31-33, 36-40, 42, 43, 45, 46-50, 52-60). Read ChemActivities 12-15. .
WEEK 9 Nov 10th	3rd Quizz Subject: Neighboring Group Effects (9.10-9.11) and Alcohols, Thiols (10.1-10.5), Ethers, Sulfides, Epoxides (11.1-11.6) **Homework**: Chapter 9, theory. Chapter 10, theory and suggested problems (18, 20-22, 25, 29, 31-33, 35-39, 44, 46, 48, 54, 56). Chapter 11, theory and suggested problems (12, 13, 15, 17, 20, 24).
WEEK 10 Nov 17th	Subject: Ethers, Sulfides, Epoxides (11.7-11.12) and Organometallic Compounds (15.1-15.2.) ChemActivities: 19 **Homework**: Chapter 11, theory and suggested problems (25, 27, 28, 33, 34, 40, 42, 44). Chapter 15, theory and suggested problems: 7-12, 16-19 Read ChemActivitiy 19. .
WEEK 11 Nov 24th	4th Quizz Subject: Aldehydes and Ketones (16.1-16.12) ChemActivities: 31, 32 **Homework**: Chapter 16, theory and suggested problems (19, 20, 24, 26, 31-33, 37, 39, 42, 43, 45, 46, 48, 52, 54, 58, 66, 70). Read ChemActivities: 31, 32.

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WEEK 12 Dec 1st	SECOND LECTURE EXAMINATION/ Explanation of the exam
WEEK13 Dec 8th	Subject: Nuclear Magnetic Resonance (13.1-13.13) ChemActivities: 16B, 16C **Homework**: Chapter 13, theory and suggested problems (11, 13, 16-18, 22, 25, 28). Read ChemActivities: 16B, 16C.
WEEK 14 Dec 14th	Subject: Infrared Spectroscopy (12.1-12.5) and Mass Spectroscopy (14.1-14.4) ChemActivities: 16A **Homework**: Chapter 12, theory and suggested problems (5-11). Chapter 14, theory and suggested problems (6, 8, 11, 14, 16, 20, 25, 30). Read ChemActivity: 16A.
WEEK 15 Dec 22nd	FINAL EXAM