ORGANIC CHEMISTRY II
Spring 2018

Instructor: Giovanni Piersanti
giovanni.piersanti@uniurb.it 0722/303319

Grader: Francesca Bartoccini
francesca.bartoccini@uniurb.it 0722/303321

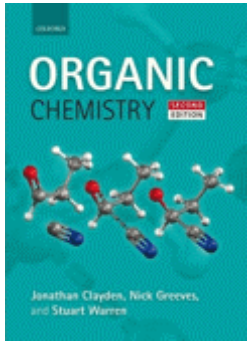
Office Hours: Any time (Send email before)
P.zza Rinascimento 6
2nd /3rd floor

Course Objectives

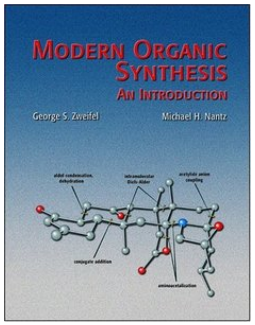
The course aims to provide students with a **more in-depth training in Organic Chemistry from the first basic course**, with particular regard to the nomenclature, chemical properties and reactivity of polyfunctional compounds, the main classes of organic compounds of biological relevance: carbohydrates, amino acids and peptides, lipids and heterocyclic systems.
Students also gain knowledge on pericyclic reactions and on the fundamental principles of organic synthesis, learning to develop simple synthetic sequences of multifunctional organic compounds and to apply the principles of modern synthetic strategies: the disconnection approaches, the formation of carbon-carbon bonds, organometallic, protection and deprotection of functional groups.

In one sentence, the primary learning goal of this course is:
The student will learn **how to study, understand, and predict the features of new organic structures and reactions by drawing analogies to past experiments**.

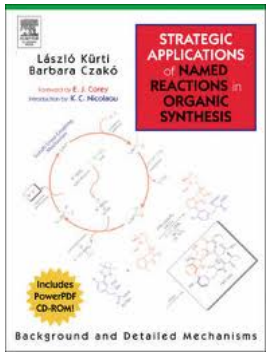
Textbooks:



Organic Chemistry
Clayden, Greeves, Warren,
Wothers Second Edition, Ed.
OXFORD



Modern Organic Synthesis- An Introduction
George Zweifel, Michael H. Nantz
Freeman and Company



Strategic Applications of
Named Reactions in Organic Synthesis
Laszlo Kurti, Barbara Czako
Elsevier

Molecular Models

Darling "Molecular Visions" Molecular Model “Kit #1 Organic, Organometallic, Inorganic Model Set (ISBN 0-9648837-1-6)”
Molecular Visions: The Flexible Molecular Model Kit [Box Set] Stephen D. Darling
http://www.amazon.com/Molecular-Visions-Flexible-Model Kit/dp/0964883716/ref=pd_sim_b_4

Resourses: WEB

http://www.people.uniurb.it/GiovanniPiersanti/organica2/lectures.html

https://www.youtube.com/user/pierorganic1

https://blended.uniurb.it/course/view.php?id=2855

MooC (Coursera , EdX, Academic Earth), ITune U

It is 100% free, so you have nothing to lose but a few minutes of your time.

Exams

The final exam is a three-hour, cumulative exam that is worth 30 points.
Exams will be graded immediately after they are completed.
Oral exam (Optinal) between -3 and +3 points

MIDterms-Assignments

Midterms will be done throughout the semester.
The assignments are intended to guide your studying toward important concepts.

They replace the final Exam if you pass all three.
With only two passed oral exam mandatory of all the topics
With only one…. I am sorry you have to do everything.

Activities	Points
MIDTERM 1-2-3	UP TO 33 (valid only following summer session)
Final Written Exam	UP TO 30
Oral exam (Optinal)	between -3 and +3

https://learnbacon.com/ (3 points, for 80-100% answers score) valid only following summer session

For those who did not pass Organic Chemistry I yet, CAN attend the class and do the MIDTERMS.
I can sign and validate the exam ONLY AFTER they passed the exam of ORGANIC chemistry I.

12 February- 18 May 2017 (Aula 4, Piazza del Rinascimento, 6)

Lecture Hours:

Monday	9:00-11:00 (Aula 4)
Wednasday	9:00-11:00 (Aula 4)
Thursday	12:30-13:30 (Aula 4)
Friday	9:30-11:30 (Aula 2)

Calendar

- Week 01- Heterocycles
- Week 02- Biological Chemistry
- Week 03- Biological Chemistry
- Week 04- Chemistry and Sterechemistry of Life

  MidTerm1 (9th March)
- Week 05- Modern Organic Reactions (Reduction and Oxidation)
- Week 06- Modern Organic Reactions (Redox Neutral reactions)
- Week 07- Modern Organic Reactions (Carbenes and Nitrenes)
- Week 08- Modern Organic Reactions (Advanced FG tranformations)

  MidTerm2 (20th April)
- Week 09- Modern Organic Reactions (Peryciclic reactions)
- Week 10- Modern Organic Reactions (Organometallics)
- Week 11- Modern Organic Reactions (Metal catalyzed Cross-Coupling)
- Week 12- Synthesis and Key Concepts in Stereoselective Synthesis

  MidTerm3 (18th May)

Study Tips

Because over 10 million organic compounds exist, memorizing the structure, properties, and reactivity of all of them would be almost impossible. Luckily, a few fundamental ideas underlie all organic reactions.

By **understanding** these themes and trends (not by memorizing them!), you should be able to rationalize unfamiliar reactions and mechanisms through analogy.

Understanding organic chemistry requires a regular program of **active studying**. No substitution exists for using a pencil and paper to draw and redraw structures, write reactions, and explore stereochemistry.

Attend all the lectures and recitation sessions. Read the suggested reading material before each lecture and write down the main points. After each lecture, summarize the major ideas and concepts in your notes within 24 hours of the class. Supplement these notes with material learned by reading the textbook. When you think you understand the material, **do the suggested problems**. If you cannot complete the problems without referencing your notes or the textbook, put them down and study the concepts again.

Master the material from the previous lecture before going to the next one. Finally, spend a few minutes each day in review. If you fail to do this, you may find your review before an exam a major learning experience and could become overwhelmed by what seems like an unreasonable amount of material.

You cannot cram for an organic exam