Loyola University Chicago

Organic Chemistry B  CHM 224  Sec. 005  Summer Session II: June 29 – August 07, 2015
Lecture:  M, W, F  08:30 AM - 11:10 AM  Room 111; Institute for Environmental Sustainability
Instructor: DONALD MAY    Contact:  dmay4@luc.edu
Office:  Flanner Hall 403; Hours: M, W, F: 11:30 AM – 12:00 PM; Announced times on exam days; Other
2) Molecular model kit

Method of instruction:  Lecture and discussion. Lectures may be supplemented with classroom discussion, use of
molecular models, use of multimedia, and/or use of computer based materials as well as individual and/or group
problem solving. Suggested textbook homework problems will be given but the student will not be required to turn
them in.

Grading:  Semester grades will be determined by the following criteria: discussion handouts, two unit exams and
one cumulative final exam. See schedule. There are no early and no make-up exams. Missed unit exams will be
scored as zero and students should expect to withdraw. The student must have a valid and verifiable reason for
missing the final exam, such as a serious illness requiring hospitalization, and so forth. Oversleeping, not knowing
the date and time of the final exam or not being prepared and so forth, are not valid reasons. If a verifiable and valid
reason cannot be provided a zero score for the final exam will be recorded. Each discussion handout will be worth
one point, which is added to the student’s exam point total. Students must attend the lecture to receive the handout
and attend lecture, to turn in the handout, on the due date. No exceptions. Students are allowed and encouraged to
work together on discussion handouts and to ask for hints from me as well. Discussion handouts are graded based
on credit/no-credit format. Discussion handouts must be: in regular #2 or HB pencil only, are expected to be neat
and legible, free of scribbling/scribbled responses, incorporate correct chemical symbols (Review the Chemical
Periodic Table of the Elements).

Final course grade:  Grading will be based on a curve: The mean, standard deviation and quartiles will be utilized
for assigning grades to scores. Grades correlated to scores will be determined from the exam score distribution.
Grades assigned will be:  A, A-, B+, B, B-, C+, C, C-, D+, D, F.

Student Conduct:  Only students enrolled for the class may attend. At all times students are expected to conduct
themselves in a professional manner, which includes but is not limited to: treating everyone in class with respect,
avoidance of extraneous comments and small group discussions during lecture. Additionally radios, headphones,
cell-phones or similar electronic devices must be in silent mode and are not permitted to be in operation during
lectures, discussions and exams. Students are expected to take care of personal matters before lectures, discussions
and exams begin. The eating and drinking of food, water, soda, use of tobacco products, chewing gum, are not
allowed, unless medically indicated by a physician. Not all possible contingencies for student conduct can be listed,
subsequently other modes of student conduct not listed, will be addressed immediately. Disruptive students will be
required to leave. Students are responsible for taking care of all personal matters before an exam begins. During
exams, please keep sounds/noises to a minimum. If a cell phone rings (beeps, buzz, etc.) during any exam, the exam
will be collected (See Academic Integrity) and the student will not be allowed to continue. Non-religious caps or
hats are not allowed to be worn during exams. Additional guidelines for exams will be posted. Exam questions will
come predominantly from lecture notes and from concepts related to suggested homework problems. Students must
bring and present their Loyola I.D. to each exam. Students are not allowed to leave during exams. If you leave, you
must turn in your exam and you will be considered finished with the exam. Students must turn in all exam
materials/pages when finished. Loose pages should be initialized by the student before turning in the exam. Exams
turned in will not be returned until all exams are graded.

Academic Integrity:  Consult the Undergraduate Studies Handbook for additional information. All students in this
course are expected to have read and to abide by the demanding standard of personal honesty, drafted by the College of
Arts & Sciences, which can be viewed at:
http://www.luc.edu/cas/pdfs/CAS_Academic_Integrity_Statement_December_07.pdf

Anything you submit that is incorporated as part of your grade in this course must represent your own work, unless
otherwise authorized. All exams are closed book and closed note: No external materials or personnel are allowed.
During exams, violations include but are not limited to: cell phone ringing, answering/using a cell phone, using
unauthorized notes or books, looking at another student’s exam, talking to other students, opening and/or utilizing
anything in your book bag after the exam begins, and so forth. Any student found to be in violation or cheating will be
given a zero for the assignment/exam and the incident will be reported to the Chemistry Department Chair and the Office
of the CAS Dean. Depending on the seriousness of the incident, additional sanctions may be imposed.
### Lecture Outline (tentative / subject to change)

**Schedule: Organic Chemistry Lecture, Chemistry 224, Summer B 2015**  
All classes: M, W, F 08:30 AM - 11:10 AM  
Room 111; Institute for Environmental Sustainability

#### JUNE/JULY

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Lectures will incorporate 50 minutes of time followed with a 10 minute break. In general, the last part of lectures will be utilized for discussion, which will start around 10:45 AM. This will allow students to clarify questions from homework, previous lecture material and so forth. Discussion handouts will also be given. Exams will be about 60 minutes in duration and generally cover all material up to and including material from the previous Friday’s lecture. Exams will begin promptly at the beginning of the lecture day (08:30 AM). Lectures subsequent to exams will then continue with new material, 10-15 minutes after the completion of each unit exam. The lecture on August 05, 2015 will be a full lecture. The final exam will be cumulative/comprehensive and will be 2 hours in duration.

**Course Practices Required:**
- College-level writing skills on exams; Communication skills for discussion and articulation of questions;  
- Completion of reading assignments, working through suggested homework and hand-outs. It is strongly suggested that the student study consistently every day: waiting until a few days before the exam, to assimilate the information generally will not give satisfactory results.

**Learning Objectives:**
- Students who successfully complete this course will be able to do the following at an acceptable level:  
  - Name and draw simple and more complex organic structures;  
  - Differentiate between isomer types (structural and stereo) and conformers; predict and name different stereoisomers;  
  - Describe and differentiate between various mechanisms, such as nucleophilic acyl addition versus substitution; differentiate between types of electrophilic aromatic substitution and nucleophilic aromatic substitution;  
  - Relate reaction mechanisms to intermediates, stereochemistry, and kinetics; predict reaction mechanism from experimentally related data and vice versa;  
  - Work with multistep reaction pathways; develop synthetic pathways to simple and more complex organic compounds;  
  - Use NMR, IR, UV, and mass spectrometry data to identify structures; predict the spectroscopic data from the structure;  
  - Predict both physical and chemical properties of ethers, aromatics, phenols, aldehydes, ketones, carboxylic acids, derivatives of carboxylic acid and amines;  
  - Predict the structure, regio-chemistry and stereochemistry of conjugated dienes reacting with dienophiles and various carbonyl and other condensation reactions;  
  - Identify and describe bio-molecules including carbohydrates, amino acids/proteins, and heterocyclic/nucleotide/nucleic acids

**Disability Accommodations:**
- Students requiring accommodations at the University need to contact the Coordinator of Services for Students with Disabilities. The instructor will provide accommodations after receiving documentation from SSWD and allowance of a reasonable time frame for arrangements (minimally, one week in advance). Accommodations cannot be retroactive. Information is available at: [http://www.luc.edu/sswd/](http://www.luc.edu/sswd/)